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Expedited/Special Dispatch

APPN: 09/134,831 (Reissue)

Filed: August 17, 1998

Appellant: Richard P. Mettke

Title: On-line Communications Terminal/Apparatus

Group Art Unit: 2743

Examiner: Stella Woo

**REVISED APPEAL BRIEF TO THE COMMISSIONER OF PATENTS
BASED ON NOTIFICATION OF NON-COMPLAINE WITH THE
REQUIREMENTS OF 37CFR 1.136, DATED June 25, 2007**

CERTIFICATE OF MAILING

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Mail Stop Appeal,
P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In response to the notification of Non-Compliance with Requirements of 37 CFR, dated June 25, 2007, the applicant submits the following revised Appeal Brief to the Commissioner of Patents. The revised Appeal Brief is in accordance with Code of Federal Regulation 37, section 41.37. In a discussion with Ms. Darlene Brown (USPTO) on June 26, 2006; it was explained that as a pro se appellant (not represented by a registered practitioner), the appellant's appeal brief only need to only substantially

comply with paragraphs (c)(1)(i) through (c)(1)(iv) and (c)(1)(vii) through (c)(1)(x) of this section. It was further noted that as a pro se appellant, the only items that I needed to address were to add an Evidence Appendix and Related Proceedings Appendix. No other corrections were required. These corrections have been made

Because this is part of a reissue prosecution, this case should be **special and expedited**. I am appealing the examiner's rejection (35 USC 103 (a)) of the claims in my Request for Continued Examination (RCE) under 37 CFR 1.114. The RCE was filed on 27 November 2006. A Final Office action was issued on February 23, 2007. This is a reissue application of Patent **5,602,905**. I have presented a *prima facie* case for the allowance of the claims during the prosecution of the reissue application. As this **reissue case** has been prosecuted for **almost nine years**, the applicant requests that a **sense of urgency** be given to this appeal and it be dealt with as a **special dispatch** as required by reissue actions, contrary to how it has been processed in the past.

1. **Real party in interest.** I, Richard P. Mettke, appellant, am the real party in interest.
2. **Related appeals and interferences.** There are no appeals or interferences known to the appellant which would directly affect or have a bearing on the Board's decision in the pending appeal.
3. **Status of claims.**

Claims 6 is pending

Claim 6 was rejected by the examiner.
4. **Claim 6 is being appealed.**

5. Status of amendments. All amendments and responses to Office Actions have failed to persuade the Examiner. No amendments are pending.

Summary of invention.

The present invention disclosed herein comprises a system for accessing and interfacing the Internet using a credit card. The system includes a video display monitor coupled to a CPU; a keyboard for providing user interface coupled to the CPU; a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal or other activity; means for accessing the Internet and allowing for user interaction; software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

Users can publicly access and interface with the Internet and pay for use or activity using a credit card. The applicant has hard time not viewing that the previous BPAI decisions were not based on hindsight. The BPAI had to present the combination of ~8 pieces of prior art two different ways in rendering their decision that the applicant claims were obvious. Furthermore, there was no discussion of the state of Internet which was key here. 1994 and 1995 were key years in the development of Intranet technologies and processes. That was a crowded time frame for Internet technologies and processes. Some of these processes and technologies may seem to have been "common sense" or obvious now, but until the growth of the Internet, they were by no means obvious. What were you doing with the Internet in January 1995? Would you have paid to access or perform some action at a terminal? I will show in this brief that the BPAI (and examiner) made many errors in their decision and that this case should have never been sent to the BPAI. The BPAI erred in its interpretation of the scope and wrongly used hindsight to combine prior

art, in essence blue printing the applicants claims to obviousness. The BPAI erred in describing the level of ordinary skill in the prior art. I will show how later in this brief. There were too many differences in the ~8 pieces of prior art that the BPAI combined to render the applicants claims as obvious. The applicant will show in this brief other considerations, which serve as indicia of nonobviousness that will include, commercial success, unsolved need and failure of others. This case and its claims should have been allowed over 7 years ago.

The appellant would like to note the original Patent was applied for on January 23,1995 and granted on February 11, 1997.

6. Issues.

I. The drawings:

The examiner objected to the drawings because the original disclosure does not support the showing of the terminal housing as depicted in Figure 2, which was submitted as part of a substitute sheet of drawing during the prosecution of the original patent for the same reasons given in the final Office action mailed March 12, 2002. Her rationale was that Figure 2, as originally filed shows a cubicle with a work area/desk top, privacy wall, chair/ stool and a terminal device generally labeled as numeral 2. There is no support in the original disclosure for the terminal housing as incorporating the monitor, keyboard, and credit card reader in the manner depicted in the current Figure 2. The examiner states that correction is required.

II. New Matter- The examiner states in the final office action mailed March 12, 2002, new matter was added as an amendment to the specification during the prosecution of

the original patent. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: col. 2, lines 3-7; col. 2, line 53 - col. 3, line 3.

III. Claim Rejections - 35 USC § 103

The examiner rejected Claim 6 under 35 U.S.C. 103(a) as being unpatentable over the article by Allen Weiner, entitled "TouchFax Provides the Ultimate in Place-Based Interactivity" (submitted as Exhibit E in the TouchNet Protest on November 4, 1998, hereinafter "Exhibit E") in view of the TouchFax brochure entitled "Vision, Power, Versatility" (submitted as Exhibit F in the TouchNet Protest on November 4, 1998, hereinafter "Exhibit F"), and further in view of an article by Rawn Shah entitled "Suggestions for Information Kiosk Systems using the World Wide Web", submitted with the Protest by North Communications, Inc. as Exhibit I (hereinafter "the Shah article") for essentially the same reasons given in the final Office action mailed March 12, 2002 and the Examiner's Answer mailed August 17, 2005, and affirmed by the BPAI Decision mailed August 31, 2006. The examiner also rejected claim 6 on the grounds of *res judicata* (see MPEP 706.03(w)).

lines 11-12).

IV Applicants argument that the Shah Abstract teaches away accessing the Internet.

The examiner states that the applicant's arguments that filed October 25, 2006 have been fully considered, but they are not persuasive. The Applicant argues that "Shah teaches away from accessing the Internet." The examiner disagreed. Her rationale; Firstly, the title of the Shah article is "Suggestions for Information Kiosk Systems

using the World Wide Web." On page 2, line 4, Shah clearly states that "the Web is part of the Internet. This allows users access to the many services on the Internet." Moreover, in the BPAI decision, which is in effect, the "law of the case" (see MPEP 706.03(w)), the Board states that "Shah teaches, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. Shah suggests that consumers wanted access to the Internet for these services.

7. Grouping of claims.

The Examiner has rejected Claim 6 as not being patentable (35 USC, 103 (a)).

8. Argument.

Issue I- the drawings; whether new matter was introduced into the drawings

The applicant respectfully submits that the same examiner accepted the resubmission of his drawings in 1996. The resubmission was based on the examiner's direction in office action dated, April 27, 1995, page 2, line 3, "Therefore, the modem, central processing unit, monitor, keyboard and printer must be shown or the features cancelled from the claims. The applicant is at a loss at how an examiner can frequently change their mind as to what is proper and what is not proper in a patent prosecution. Never the less, the applicant will work with the examiner to determine what is acceptable, when the prosecution reaches the point of reissue.

Issue II New Matter-

The items that the examiner requested be removed which is not supported by the original disclosure (col. 2, lines 3-7; col. 2, line 53 - col. 3, line 3) where deleted in an Amendment **dated May 29, 2002.**

Issue III-Whether claim 6 is unpatenable under 35 USC, 103 (a) over the prior

art

In addition to arguments that will be provided below, the applicant feels that the BPAI's previous decision and review of the appeal should have been held to the standards of Section 706 of the Administrative Procedures Act (APA). The BPAI should have reviewed this case on what was in the record (Four Corners of the closed record) and not be allowed to bring in references or make decisions based on expertise or experience. This would have prevented hindsight (the applicant's disclosure was in JAN 95, over 12 years ago). Hindsight is difficult to overcome in case that has been going on for such a lengthy period. By not adhering to section 706, APA, the boards previous decision lends it self to question whether there was an impartial review of the record. The BPAI states "that this case was important because of dismissed civil litigation (cases that were dismissed 1998 and 1999) and protests that were filed". Does that mean that other cases are not as important? It appears that the previous BPAI review of this case was given more scrutiny then other actions before the board. Had the procedures in the APA been followed, there would not have been any perceived irregularities or perceptions. Based on the above, the BPAI should remove from the record any mention or reference to the Internet Navigator, Aliens among Us, On Haiti, Shooting from the hip and any reference to Wikipedia. Any decisions made on this case should be made from the record. The Examiner based her response in the Final office action, dated February 23,2007 for the most part on her previous responses to office and appeal actions (not withstanding the applicant's arguments that the Shah Abstract teaches away from accessing the Intranet that is addressed below in Issue IV). The examiner pretty much summed up that the applicant's comments/arguments relating to that the patentability of Claim 6 was without

merit because of the BPAI's decision of August 31, 2006 which is in effect, the "law of the case" or *res judicata*. The applicant respectfully disagrees that he can not rebut the BPAI's decision, otherwise the August 31, 2006 decision would have been made final for judicial review. At least the applicant would hope so. Otherwise, the applicant would be wasting another twelve months or more submitting another appeal. This case has clearly taken too much time in to come up with a final resolution. If I had to keep an attorney on retainer to prosecute this case for the entire time, I'm sure it would have cost the applicant \$ ~ 3-5 million, over the almost 9 years it has taken. I'm surprised that any independent inventor can get anything patented. I intend to address my comments/arguments to both the BPAI decision of August 31, 2006 and the Final Office action of February 23, 2007 relating to the rejection of Claim 6 in the following paragraphs.

The applicant disagrees that "TOUCHFAX AMERICA, video tape recorded May 14, (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA)" render claim 6 obvious. The videotape is clearly a concept, experimental, an idea and marketing tool. The examiner rightfully excluded it in an Office Action dated August 24 1999, page 8, 3rd paragraph". Although Exhibit C, 4 shows a frame from the video tape of exhibit C advertising connection to the Internet, it was stated in the deposition Daniel J. Toughey (attachment D, pages 14-15 of RCE) that the terminal shown in the video tape did not actually enable a user to gain access or interface with the Internet.

This alone should have negated its use as prior art or its use as rendering the applicant's claims obvious. The applicant also disagrees that TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest) is prior art. In his deposition (attachment I, page 22 & 98 of RCA), Mr. Toughey states specifically that in 1991 (the time the document was distributed), the terminals did not have access to the Internet, Prodigy and CompuServe. This was a concept, experimental, an idea and marketing tool. This alone should have negated its use as prior art or its use as rendering the applicant's claims obvious. Probable utility does not establish practical utility.

The BPAI rejected claims 6-9 under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D., Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

The BPAI states that in Exhibit E it states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (page 31, line 16 of BPAI decision) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax terminals to provide public online services and public Internet access as those features became common at home and business."

The applicant does not understand how this is a "suggestion to modify" a TouchFax terminal to include Internet access and interface. The only suggestion would be if they (Touchfax) saw the applicant's disclosure and added this capability to their terminal. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access the Internet prior to the date of the applicant's

disclosure in January 25, 1995. He also goes on to state that as of the date of his deposition, **June 16, 1998**, **no** Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15, 44, original/first appeal). This is three and a half years after the applicant's disclosure on January 23, 1995. This clearly points to nonobviousness and demonstrates a lack of suggestion, teaching or motivation.

The BPAI suggests that the motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all of the exhibits are from the same corporation, TouchFax, and expressly teach modifications.

The applicant respectfully disagrees that there is motivation to combine Exhibits C, D, E, and F and that they expressly teach the modifications to add Internet access and interface on a point-of-sale basis. The BPAI does not "show" objectively how the references teach this modification other than seeing the applicant's disclosure in January 1995.

Mr. Massey's statements in his deposition, "that the BPAI quotes" stated that they (exhibits E & F) have the capability to expand or modify the terminal applications to "meet customers needs" are indefinite and probable. Of course he is going to say this when he is under going a litigation deposition. There is no corroboration of his statements. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access or interface with the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of the deposition, **June 16, 1998**, **3 ½ years after the applicants disclosure**, **no** Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15,44). This was **three and half years** after the applicant's disclosure and clearly and unequivocally points to **nonobviousness**.

I would like to point out that there are distinct and clear difference's between Commercial On-line Services (AOL, Prodigy, CompuServe,etc) and the Internet. The BPAI has for the most part adequately defined them in their August 31, 2006 decision. I shall not repeat the descriptions here.

I will take exception to the BPAI's interpretation of access (and interface; which was not addressed in their email analysis) to the Intranet. The BPAI stated that because some of the Commercial On-line services provided email, they provided access to the Internet via e-mail. The board stated on page 47 (BPAI decision), that the claims recite access to the Internet is met by access to "one service" on the Internet, such as e-mail. The board also states that email through a Commercial On-line service provider (AOL,Prodigy, Compuserve, etc.)that uses the Internet to send email qualifies as "access to the Internet". The applicant respectfully asks the questions; What about interface?

The applicant respectfully disagrees that accessing on-line service providers qualify as Internet access and interface. Claim 6 states "accessing the Internet ", as well as interfacing with the Internet. My claims do not say that you have to go through the method of point A (commercial on-line service) and B (send an email) and then point C email goes through the back office on-line service propriety architecture and may or may not be sent over the Internet. Clearly the claims in 6 say access and interface with the Internet. You either have access and interface or not. This an area that the applicant feels is clear a case of blue printing by the BPAI; using my disclosure to put together pieces of prior art to teach my claims.

On Haiti describes that "'Cyberia' -- a 'cyberspace cafe' --has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour."

On Haiti has 26 words in the article. There is not enough information to assess this prior art. There is not enough detail that discloses the structure, interface, and processes for this reference to be applied as prior art. Let alone suggesting, teaching or showing motivation to combine. Regardless, the BPAI has not provided any clear specific evidence to support the combination or modification as they suggest. The BPAI's unsupported methodology in using Haiti and its combination of prior art could render just about any patent obvious. Suppose it was an article about a "man sells cold soda from his store.....and 19 more words". Using the methodology above, the BPAI could determine that all vending machines and associated technologies (Refrigeration, coin acceptance machines, etc) were obvious. I could give many other examples.

The Landis & Gyr, ISDN console, Public telephone and telematic console. The examiner had reviewed; this relied upon prior art by the BPAI. In an Office Action Summary, dated August 24, 1999, the Examiner stated on page 8- 9, ".they lack certain elements in the claims, such as a printer, touch screen interface and Internet access." Hence it was not relied on prior art. The applicant agrees.

The scope of the invention Arguments

The BPAI defined the applicant's field of endeavor as a pay-per-use public communication terminal, and the particular problem with which the invention was concerned with was providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals. The BPAI also said the references

were within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access and interface or as pay-as you-use application.

The applicant respectfully disagrees that the terminals listed above (Exhibits C, D, E, F, L&G ISDN console) are within the field of endeavor (nor are they pertinent) to the matter at hand. They are not analogous art. None solve the problem of accessing the Internet or interface as the applicant's claims represent. If the terminals accessed the Internet (the problem that the applicant solves), allowed for interface on a point-of-sale basis, then they may have been pertinent and relating to the applicants filed of endeavor. The BPAI use of Public Communications terminal is too broad as a field of endeavor.

Communications relates to many sub areas, facsimile machines, telephones, televisions, cellular phone and global positioning systems just to mention some of the areas. A more narrowed (and correct) field of endeavor would have been "Internet". Hence, if the proper filed of art were used, it would negate the BPAI's analysis and resultant decision.

The BPAI brief states "Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet. (The last part of the underlined statement is pure speculation

inserted by the BPAI, as evidenced by Mr. Massey and Mr. Toughey statements that their terminals, more than 2 ½ years after the applicant's disclosure could not access the Internet).

It has been proven by statements in a deposition by Mr. Toughey, (Attachment I, pages 14-15,44), that the terminal in Exhibit C did not access or interface with the Internet. That the tape was a vision or concept. Also, in his deposition he stated that as of the date of the deposition (June 16, 1998), 3 ½ years after the applicants disclosure, that the referenced Touchfax terminals still did not have the capability to access and interface with the Internet as in the applicant's claims. So, how could it be a later improvement, as stated by the BPAI? Applicant fails to see how exhibit C "demonstrates" that the terminal "can" be built. Particularly when the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet, as previously mentioned in his deposition as late as June 1998. Furthermore, the applicant fails to see any objective or specific reasons provided by the BPAI as to how exhibits C, E and F show motivation to add Internet access and interface. Again, the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998 and exhibit C was a marketing tool and concept. Probable utility is not practical utility.

The BPAI brief states that" Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by

the same corporation provides **the express** suggestion to modify Exhibits E and F to provide access to online service providers.

Regardless of the BPAI interpretation of what qualifies for Internet access, the *Internet Navigator* (a reference provided by the BPAI) clearly points out that on-line service providers are not the Internet (page 57). As previously discussed, Touchfax representatives stated (in a deposition) that in 1991, the date of the publication, that they did not have access to on-line services such as Prodigy and CompuServe. This should have negated this document as any type of reference.

The BPAI stated that they approached “the obviousness issue from two directions. First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we **then show why it would have been obvious** to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer. Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the **express suggestion** to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a videotape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of

access to the Internet. Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

On Haiti discloses charging for use of a public computer terminal to access to the Internet. One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

The applicant fails to see any motivation, teaching or desirability to combine the references as shown; to teach the applicants claims. Nor does the applicant see how one skilled in the art would have been motivated by the BPAI reasoning for obviousness described above. The BPAI states that they are not relying on Exhibit C as a main reference, but ties it in with Exhibits D, E&F and On Haiti. The applicant fails to see how there can be an "express suggestion" to use Exhibit C, D, E & F in a combination to modify. As previously mentioned, Exhibit C was marketing tool and concept, not a capability. The owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition **as late as June 1998**. Also as previously mentioned, Exhibit D did not have the all the capabilities listed on it in 1991, particularly access to on-line services. Exhibit D was simply a concept or idea, a listing of capabilities that that did not exist at the time (1991). This was stated in a deposition by the owner of Touchfax (Attachment I of RCE, pages 22 & 98).

IV Applicants argument that the Shah Abstract teaches away accessing the Internet.

Just to be clear, the rejection (35 U.S.C. § 103(a)) of the applicants reissue is based on the combination Exhibits E & F (attachments C&D of RCA) and based on the teaching of Shah (Attachment B). The additional rejections by the BPAI will be addressed later in this document. Applicant will not directly address the combination of prior art discussed above since the new argument is that the Shah abstract teaches away from accessing the Internet.

A key point here is that the examiners (and BPAI) decision was based on the Shah reference teaching accessing the Internet (in combination with Exhibit E- Attachment C & Exhibit F-Attachment D). "Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract)"

The Applicant maintains and will demonstrate that the Shah **teaches away from accessing** the Internet. And hence should not be used as a prior art rendering the applicants application as obvious in combination with exhibits E& F. The applicant maintains that the both the Examiner and BPAI misinterpreted or misread the Shah abstract. The Shah abstract does not teach accessing the Internet. The Shah Article teaching using a **"web style browser"** on a standalone or networked (not to the Internet). It teaches away from accessing the Internet. The applicant will demonstrate this in the following analysis of the Shah Abstract. The entire article needs to be read and interpreted as a whole, not just the first few introductory paragraphs. It is clear that the Shah teaches away from accessing the Internet, and only wants to use the "Interface or web browser" popularized on the Internet in the Kiosks he describes. The irony I (from the applicants view) is that if you pull this

piece of prior art from the Examiners equation for a rejection it would be an “allowed” reissue patent and would have never went before the BPAI. .

Analysis of the Shah abstract-

Summary- The Shah abstract teaches using a World Wide Web type “interface” (or browser)(**Emphasis added**) as part of an information kiosk system. Below is a “cut-and-paste” of the Shah relied upon abstract paragraphs with an interpretation and comments.

The first paragraph calls out the systems that he is referencing are “kiosk based”

- The second paragraph talks about how the Internets World Wide Web has provided the internet with easy interface (**emphasis added**)
- The third paragraph talks about the requirements that that an information kiosk system based upon the World Wide Web must have. Hence, it talks about a Kiosk-based information system based upon the World Wide Web in the context of a type of user interface (emphasis added) to be used in another application, not accessing the Internet.
- Another key point

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

World Wide Web has provided the Internet with an easy interface superceding access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Below is a cut-and-paste of the Shah "Introduction" in the relied upon abstract.

- Again, in the introduction Shah talks about user-friendly interfaces. He means the design of the World Wide Web interface; the browser (**not accessing the Internet**).
- Another key point in understanding the abstract is Shah's reference to Kiosk-based Information systems, not Internet based or accessible. Explicit that they are not connected to the internet, nor suggest it.

Introduction

Kiosk-based Information system has many requirements to create the most-user friendly interface while maintaining security and functionality. *User friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

Below is a cut-and- paste of the next Shah abstract paragraph.

They key to understanding/interpreting this paragraph is in the first paragraph.

Shah asks the question is why one would use the World Wide Web as a **design** for a

kiosk-based information system. Key points are World Wide Web as a **design**

(**Emphasis added**) and for a Kiosk- based information system. **Not Internet access.**

He goes on to talk about how the web and its capabilities (reference to the Browser or interface) are a standard on the Internet.

When he is talking about the Web, he clearly is talking about the Web and it's user

interface. This paragraph has the only mention of the Internet in Shah's abstract. And it is only in the context of the Web (Browser) and its success on the Internet, not accessing the Internet

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Below is a cut-and- paste of the next Shah abstract paragraph.

Shah talks about interest in the World Wide Web. Then he goes on to talk about the various browsers. In context, he is talking about the functionality of the browsers. **Not interfacing or accessing the Internet**. And then he goes on to talk about who may have an interest in a “kiosk based” information system (emphasis added).

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organization who wish to provide a paid service through kiosks

Below is a cut-and-paste of the next Shah abstract paragraph.

Here Shah talks about the recommended user interface of the Browser.

User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage session's counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. If this were indeed an Internet accessible system, there would be no need for servers. He talks about connecting to a network and stand-alone systems with no network interface. So, at the most what he discusses is a Local Areas Network (LAN). Emphasis added. Not accessing the Internet (Emphasis added).

The Server.

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used. Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about

servers. This is **probably the most important paragraph** in my claim that the Shah abstract teaches away from accessing that the Internet. Here is where he talks about the

functionality of the kiosk- based Information system that he describes. Again, he talks about servers networked (LAN) providing the information. Not the Internet. If the system had functionality with the Internet it would have been in this paragraph.

Functionality

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. Her Shah talks about storage of data and associated problems. If this were Internet based or assessable this would not be an issue. He also talks about a the problems associated with local Kiosks (not networked)

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which

is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about security. Shah talks about security of stand-alone and networked systems

Again, when networked, it's a LAN. When standing alone all information is contained on the Kiosks. There is no mention of Internet access or interface.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the serves computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIXC, VMS, etc, operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often.... (Article cuts off here. But irrelevant...)

No comments on the last paragraph.

Control

Control involves the access to the Server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied is very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation. Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific access to documents or services. The concept of registered users and billing may be built in to the server.

In summary, the Shah abstract teaches using the World Wide Web **"interface design"**(browser) on a stand-alone (local) or networked (LAN). Therefore, **it clearly teaches away from accessing the Internet.** As the Shah prior art was the main reference that examiner (and BPAI) decided was rendering the applicant application obvious (because it teaches accessing the internet), when combined with Exhibits E and F. The Shah abstract does not teach, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. The analysis provided above clearly demonstrates this fact. The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the RCE Final Office Action and appeal brief to the BPAI. The applicant has taken the liberty of providing a **"marked up"**version of the Shah abstarct at Appendix B-2 to assist in the interpretation.

9. Remarks

The BPAI has not shown any objective or specific teaching, suggestion or motivation as to why someone skilled in the art would combine the prior art references to yield what is in the applicant's disclosure, of January 1995, even though they approached the obvious analysis from two different avenues. The applicant feels that the BPAI used the applicant's disclosure to blue print pieces of prior art to defeat patentability. This has been clearly shown in the above arguments. As demonstrated in the applicant's

arguments, the BPAI decision appears to be a discussion of the ways multiple art references can be read on the claimed invention in **January 1995**.

The BPAI has failed to show any pertinent desirability that would suggest, teach or motivate the combination of the relied on prior art that would produce the results in the applicant's claims, disclosed in **January 1995**.

The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action of the RCA and appeal brief to the BPAI, as well as the BPAI rejections of obviousness to issue an allowance.

10. Summary.

In addition to the arguments provided above, additional indicia of nonobviousness relating to this reissue action should be considered and addressed by the BPAI:

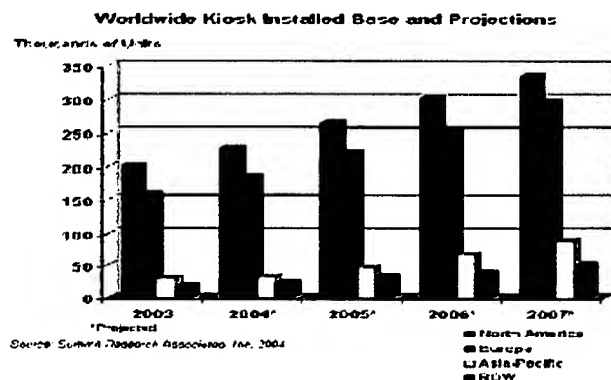
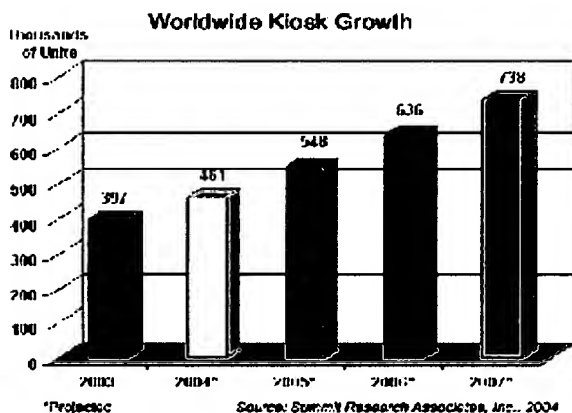
- **The applicant's claims provides an unexpected result.** The appellant's invention provides for an unexpected result. The results achieved by this invention are new (at the time of the original disclosure), unexpected, superior, unsuggested by any of the relied on prior art. Specifically, a public access terminal allowing interface and access to the Internet and allowing for use a credit card for use of the terminal or other activity.
- **The application solves a different problem.** Appellant's invention solves a different problem than the references, and such different problem is recited in the claims. *In re Wright, 6 USPQ2d 1959 (1988)* Specifically, a public access terminal allowing interface and access to the Internet and allowing for use a credit card for use of the terminal or other activity. No prior art reference implicitly or explicitly had the capabilities

described in the appellant's claims at the time of the appellant's disclosure in January 1995. The evidence supporting this has been provided previously and in this appeal brief.

- **There has been unsuggested combination.** The prior art references do not contain any suggestion (express or implied) that they be combined, or that they be combined as the examiner and the BPAI suggests. The BPAI attempts to do this by combining ~8 pieces of prior that was not suggested and suggest that the appellant claims were obvious. I stress that possibly in the current time frame the appellant claims would be obvious or viewed as common sense, but not at the time of the appellants disclosure in January 1995.
- **Modifications are necessary.** It would be necessary to make modifications, not taught in the prior art, in order to combine the references in the manner suggested by the examiner. This has been proven by the examiners and BPAI's numerous combinations of prior art and assumptions of those skilled in the art in JAN 1995. No convincing evidence to the contrary has been provided.
- **Multiplicity of references.** The fact that ~ eight references must be combined in two different methods (eleven counting the examiner) to meet the claims invention is unequivocal evidence of nonobviousness.
- **Prior Art References.** The Patent (5,602,905) that the applicant is prosecuting for reissue is referenced as prior art in 81 issued patents. A typical patent is mentioned as prior art ~ 6-12 times in issued patents. A patent that is mentioned ~12-30 times as prior art in issued patents is usually considered a technology leading patent and has a high rating factor for commercial success. So, I guess a patent that is mentioned 81 times as prior art in issued patents is a home run technology wise and commercial wise. This definitely points to nonobviousness.

- Failure of Others.** Prior to the applicant's January 1995 disclosure, no entity had produced a terminal that contained all of the elements of the applicant's claims. The examiner herself stated that in an office action, dated 08/25/99 (page 4 line 5-17) that the majority of the references that the BPAI cites as obvious, were not invented prior to the applicant's disclosure. The protestors had claimed that Exhibits C, D, E, F and G demonstrated that they made public the subject of the patent. The examiner ruled that they were not invented, unequivocally prior to January 1995. This should have ruled out any of BPAI's use of these references. The BPAI did not state that the examiner erred? Is this a case of the BPAI and Examiner refusing to admit they made a mistake? During the original prosecution, the USPTO admitted that errors were made in the prosecution, and had the moral courage to admit they made mistakes and allowed the patent. s

Commercial Success. The below graphics depicts worldwide Internet Kiosk growth that was on Summit Research Consulting web site (http://www.summit-res.com/kanditreport_gs.html) in April 2005. Summit Research are considered experts in the Kiosk field. At Appendix D is an overview of an Internet Kiosk report in 2002 by Summit Research. The majority of these kiosk employ elements of the appellant's claims.



Again, the appellant would like to reiterate, ^Q~~has~~_{has} been presented above, the BPAI's previous decision and review of the appeal should have been held to the standards of **Section 706 of the Administrative Procedures Act (APA)**. The BPAI should have reviewed this case on what was in the record (four corners of the closed record) and not be allowed to bring in references or make decisions based on expertise or experience. This would have prevented hindsight (the applicant's disclosure was in JAN 95, over 12 years ago), which is difficult to overcome in case that has been going on for such a lengthy period. By not adhering to section 706, APA, the boards previous decision lends it self to question whether their was an impartial review of the record. The BPAI states that this case was important because of dismissed civil litigation (cases that were dismissed 1998 and 1999) and protests that were filed. It appears that the previous BPAI review of this case was given more scrutiny then other actions before the board. Had the procedures in the APA been followed, there would not have been any perceived irregularities or perceptions. Based on the above, the BPAI should remove from the record any mention or reference to the Internet Navigator, Aliens among Us, On Haiti, shooting from the hip and any reference to Wikipedia. Any decisions made on this case should be made from the record(Closed four corners).

Appellant respectfully requests that the rejections be withdrawn and allowance be provided. The appellant has made a diligent effort to amend the application so that it is in an allowable state that defines a novel structure, nonobviousness, because it produces new and unexpected results at the time of the application (**January 23, 1995**).

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. Mettke', with a long horizontal line extending to the right.

Richard P. Mettke
7921 Panary Court,
Reynoldsburg, OH 43068

Voice: 614-861-1847
FAX: 614-458-6446

Email: rmettke@aol.com

Appendices:

Appendix A- The Claims

Appendix B- Evidence Appendix

Appendix C- Related Proceedings Appendix

Appendix A-

THE CLAIMS

Claim Status:

The Claims:

Claim 6 (Amended)

A public on-line Internet terminal comprising a:

a central processing unit (CPU);

a video display monitor coupled to the CPU;

a keyboard for providing user interface coupled to the CPU;

a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal or other activity;

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

Appendix B- Evidence Appendix

THE WORLD WIDE WEB

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w@rld.com
D Systems & Networking, Inc.
01 N. Campbell Ave., Ste 202B
ucson, Arizona, 85719
602 318 0696 [US]

clean

e World Wide Web Information Kiosks Special Interest Group

April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superceding other access systems in its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Introduction

Kiosk-based Information system has many requirements to create the most user-friendly interface while maintaining security and functionality. *User-friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

I

Appendix

B-1-1

- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such systems. *Advertising*

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as $t=\infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

B-1-2

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

2/3/99 1:00 PM

B-1-3

Control

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

References

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B-1-4

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Write-on
Version

World Wide Web Information Kiosks Special Interest Group

April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

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In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

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Kiosk-based Information system has many requirements to create the most user-friendly interface while maintaining security and functionality. User-friendliness is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

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The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Interface
- the Web has proven itself as a successful networked information system through its popularity on the Internet.

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B-2-1

95 design
www design
95 an
Interface

~~EXHIBIT~~
~~EXHIBIT~~
~~EXHIBIT~~

- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

He means the web is
an interface or browser

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

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- Commercial Information Referral organizations who wish to provide a paid service through such kiosks. *Industry*

Web Browser
Kiosk
based
hot internet

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

Interface - POS

No mention
of
Internet

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as $t = \infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

hot
Internet
based

B-2-2

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

No mention of Internet

• User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webpace. → Browser
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

No mention of Internet in the User Interface

The Server

There are also suggested requirements for the Server program for these information kiosk systems.

Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Standalone

or wide area network

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Functionality

No mention of Internet

B-2-3

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

- not internet

no
internet

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

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mention
of
Internet

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standalone or remote
server

no
internet

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local computer
network

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

B-2-4

CONTROL

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Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

References

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REF/5602905: 81 patents.

Hits 1 through 50 out of 81

Final 31 Hits

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Refine Search ref/5602905

PAT. NO.	Title
1 7,171,686	T <u>Operating system extension to provide security for web-based public access services</u>
2 7,155,663	T <u>Technique for implementing browser-initiated user-transparent network-distributed advertising and for interstitially displaying an advertisement, so distributed, through a web browser in response to a user click-stream</u>
3 7,149,958	T <u>Technique for implementing browser-initiated user-transparent network-distributed advertising and for interstitially displaying an advertisement, so distributed, through a web browser in response to a user click-stream</u>
4 7,149,723	T <u>System and method for determining computer access with electronic payment mechanism</u>
5 7,143,337	T <u>Apparatus and accompanying methods for network distribution and interstitial rendering of information objects to client computers</u>
6 7,120,235	T <u>Method and apparatus to provide pay-per-call performance based advertising</u>
7 7,107,335	T <u>Network access control device through fast recognition of application frames</u>
8 7,089,209	T <u>Method for revaluing a phone card</u>
9 7,025,255	T <u>Application service provider and automated transaction machine system and method</u>
10 6,990,630	T <u>TECHNIQUE FOR IMPLEMENTING BROWSER-INITIATED USER-TRANSPARENT NETWORK-DISTRIBUTED ADVERTISING AND FOR INTERSTITIALLY DISPLAYING AN ADVERTISEMENT, SO DISTRIBUTED, THROUGH A WEB BROWSER IN RESPONSE TO A USER CLICK-STREAM</u>
11 6,978,252	T <u>Method and system for transacting with network traffic</u>
12 6,945,457	T <u>Automated transaction machine</u>
13 6,944,667	T <u>Multi-media remote data access terminals and system</u>

<http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fmeta...> 5/6/2007

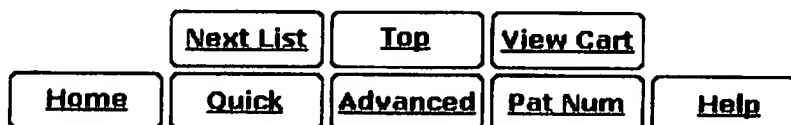
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Nonindex D

- 14 6,907,476 **T** Open network system and method for I/O operations with non-standard I/O devices using an extended open network protocol
- 15 6,880,123 **T** Apparatus and accompanying methods for implementing a network distribution server for use in providing interstitial web advertisements to a client computer
- 16 6,865,540 **T** Method and apparatus for providing group calls via the internet
- 17 6,850,996 **T** System and method for enabling transactions between a web server and an automated teller machine over the internet
- 18 6,847,998 **T** Apparatus for control and certification of the delivery of goods
- 19 6,807,532 **T** Method of soliciting a user to input survey data at an electronic commerce terminal
- 20 6,801,899 **T** Assistance method and apparatus
- 21 6,785,659 **T** Agent-based technique for implementing browser-initiated user-transparent interstitial web advertising in a client computer
- 22 6,763,336 **T** METHOD OF TRANSACTING AN ELECTRONIC MAIL, AN ELECTRONIC COMMERCE, AND AN ELECTRONIC BUSINESS TRANSACTION BY AN ELECTRONIC COMMERCE TERMINAL USING A WIRELESSLY NETWORKED PLURALITY OF PORTABLE DIGITAL DEVICES
- 23 6,754,641 **T** Dynamic identification interchange method for exchanging one form of identification for another
- 24 6,745,259 **T** OPEN NETWORK SYSTEM FOR I/O OPERATION INCLUDING A COMMON GATEWAY INTERFACE AND AN EXTENDED OPEN NETWORK PROTOCOL WITH NON-STANDARD I/O DEVICES UTILIZING DEVICE AND IDENTIFIER FOR OPERATION TO BE PERFORMED WITH DEVICE
- 25 6,732,178 **T** Forced network portal
- 26 6,704,403 **T** Apparatus and method for ensuring a real-time connection between users and selected service provider using voice mail
- 27 6,694,387 **T** System for enabling smart card transactions to occur over the internet and associated method
- 28 6,688,518 **T** Wall-mounted touch screen information system
- 29 6,687,737 **T** Apparatus and accompanying methods for network distribution and interstitial rendering of information objects to client computers
- 30 6,684,269 **T** System and method for enabling transactions between a web server and a smart card, telephone, or personal digital assistant over the internet
- 31 6,684,197 **T** Method for revaluing a private label card using an electronic commerce terminal
- 32 6,643,623 **T** Method of transacting an electronic mail, an electronic commerce, and an electronic business transaction by an electronic commerce terminal using a gas pump
- 33 6,636,590 **T** Apparatus and method for specifying and obtaining services through voice commands
- 34 6,629,080 **T** Transaction processing method of fulfilling an electronic commerce transaction by an electronic commerce terminal system
- 35 6,625,645 **T** Automatic static to dynamic IP address and DNS address management for remote communications network access
- 36 6,622,124 **T** Method of transacting an electronic mail, an electronic commerce, and an electronic business transaction by an electronic commerce terminal operated on a transportation vehicle
- 37 6,615,183 **T** Method of warehousing user data entered at an electronic commerce terminal
- 38 6,611,810 **T** Store display window connected to an electronic commerce terminal

B-3-2

- 39 6,609,103 **T** Electronic commerce terminal for facilitating incentive-based purchasing on transportation vehicles
- 40 6,609,102 **T** Universal interactive advertizing and payment system for public access electronic commerce and business related products and services
- 41 6,606,605 **T** Method to obtain customer specific data for public access electronic commerce services
- 42 6,606,602 **T** Vending machine control system having access to the internet for the purposes of transacting e-mail, e-commerce, and e-business, and for conducting vending transactions
- 43 6,604,087 **T** Vending access to the internet, business application software, e-commerce, and e-business in a hotel room
- 44 6,604,086 **T** Electronic commerce terminal connected to a vending machine operable as a telephone
- 45 6,604,085 **T** Universal interactive advertising and payment system network for public access electronic commerce and business related products and services
- 46 6,601,040 **T** Electronic commerce terminal for wirelessly communicating to a plurality of communication devices
- 47 6,601,039 **T** Gas pump control system having access to the internet for the purposes of transacting e-mail, e-commerce, and e-business, and for conducting vending transactions
- 48 6,601,038 **T** Delivery of goods and services resultant from an electronic commerce transaction by way of a pack and ship type company
- 49 6,601,037 **T** System and method of processing credit card, e-commerce, and e-business transactions without the merchant incurring transaction processing fees or charges worldwide
- 50 6,549,889 **T** Assistance method and apparatus
-



B-3-3

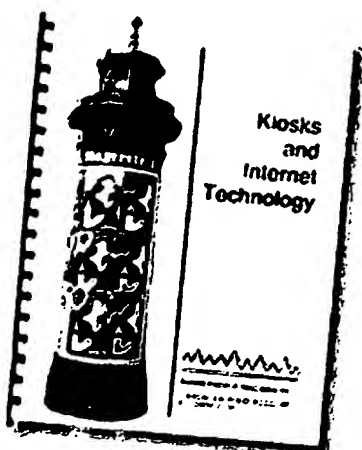


Table of Contents

REPORT INTRODUCTION and EXECUTIVE SUMMARY

Riding the Internet Coattails
Installed Base
Revenue Projections
Market Sectors

INDUSTRY ACTIVITIES

Public Sector
Public Transportation
Self-Checkout Devices
Web Payphones
Financial Services
Retail

SURVEY RESULTS

Number of Kiosks Installed
Hours of Heaviest Kiosk Use:
All Kiosks
Number of Users per Day:
All Kiosks
Number of Users per Day:
North America
Number of Users per Day:
Europe
Number of Users per Day:
Pacific Rim
Number of Users per Day:
Rest of the World
Average Time Spent at the Kiosk
Cost per Kiosk
Cost per Unit-North America
Cost per Unit-Europe
Cost per Unit-Pacific Rim
Cost per Unit-ROW
Peripherals Used in Kiosks
Kiosk Pointing Devices
Kiosk Payment Acceptors
Online Language Populations
Internet Access Devices:
Per Minute Charges
Free Sites
Usage Patterns
Remote Monitoring Software
Service Providers
Consumables Providers

our reports

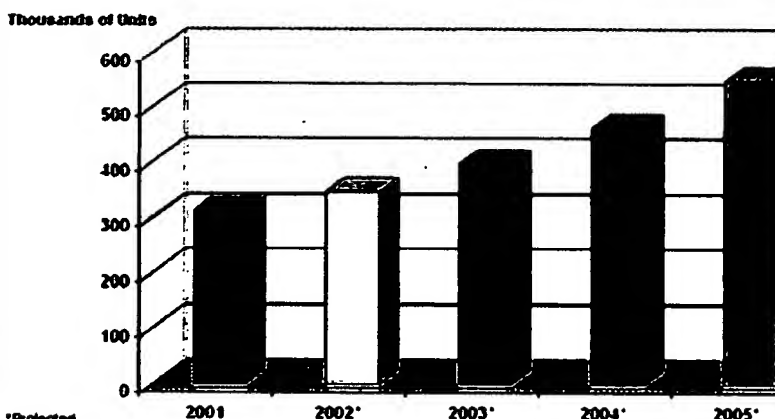
Kiosks and Internet Technology

Totally re-written in 2002, this report is the most comprehensive ever produced on the kiosk industry. Based upon an unprecedented response to an extensive survey and follow-up research, it provides Internet kiosk installed base and revenue projections from the present time through 2005. The nearly 500-page report includes 35 charts and tables, examines trends on the leading kiosk issues of the day and offers many additional looks at the future of this fast-growing industry.

The report defines Internet Kiosks as traditional kiosks whose data is Web-based and whose customers use a proprietary or commercially available easy to use "browser wrapper" to access that information. The report no longer separates public Internet access devices, also known as Web Payphones, into a unique category. These are public terminals where users pay for each minute of connect time to conduct a wide variety of activities, including general Web surfing, e-mail, and e-commerce. In increasingly rare cases, advertisers absorb online costs, thereby offering free access.

The report provides detailed information on 225 companies in the Internet kiosk industry, discussing the market segments they are targeting (including key customers), their featured applications, the key design and development issues they face, what sets them apart from the competition and other valuable statistics of interest to kiosk, financial and telecommunication professionals. The following chart illustrates the current and projected growth for the industry. While it reflects a slow and steady improvement, it also shows the reality of the past year when many kiosk projects were on hold until the economy begins to recover. Summit believes that 2002 will be a year of re-grouping; the upswing of activity will not begin in earnest until 2003.

Worldwide Internet Kiosk Growth



*Projected
Source: Summit Research Associates, Inc., 2002

The report features company profiles of 225 companies in the Internet kiosk industry, representing 38 countries around the world. Countries included

Appendix E
B-4-1

22. Peripherals Used in Kiosks
23. Kiosk Pointing Devices
24. Kiosk Payment Acceptors
25. Online Language Populations
26. Internet Access Devices- Per Minute Charges
27. Access to Free Sites
28. Usage Patterns
29. Remote Monitoring
30. Service Providers
31. Providers of Consumables Replenishment
32. Leading Development Issues
33. Leading Design Issues
34. Special Capabilities
35. Future Plans

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B-4-2

Leading Development Issues
Leading Design Issues
Special Capabilities
Future Plans

COMPANY PROFILES

More than 220 companies are profiled.

APPENDIX A Kiosk Questionnaire

APPENDIX B Commercially Available

Browser Front-Ends

APPENDIX C ADA Resources

Table of Figures

1. Internet Kiosk Current and Projected Installed Base
2. Internet Kiosk Installed Base, 2001
3. Internet Kiosk Installed Base, 2001-2005
4. Internet Kiosk Installed Base, Percentage Growth 2002-2005
5. Internet Kiosks, Current and Projected Revenues
6. Worldwide Internet Kiosk CAGR, 2001-2005
7. Worldwide Internet Kiosk Market Breakdown
8. 2001 Worldwide Kiosk Industry Market Sectors
9. Number of Kiosks
10. Hours of Heaviest Kiosk Use
11. Average Number of Users per Day
12. Average Number of Users per Day - North America
13. Average Number of Users per Day - Europe
14. Average Number of Users per Day - Pacific Rim
15. Average Number of Users per Day - Rest of the World
16. Average Time Spent at the Kiosk
17. Overall Cost per Kiosk
18. Cost per Unit - North America
19. Cost per Unit - Europe
20. Cost per Unit - Pacific Rim
21. Cost per Unit - ROW

are:

Argentina
Australia
Austria
Belgium
Brazil
Canada
Chile
Denmark
Finland
France
Germany
Greece
Hong Kong
Iceland
India
Ireland
Israel
Italy
Korea

Luxembourg
Mexico
New Zealand
Peru
Philippines
Portugal
Russia
Scotland
Singapore
Slovenia
South Africa
Spain
Switzerland
Taiwan
Thailand
The Netherlands
Turkey
United Kingdom
United States

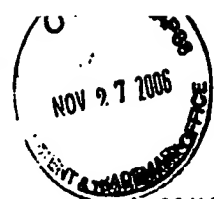
Some of the 225 companies profiled in the report include:

Abuzz Technologies
Apunix
Arral Industries
Avanzit Tecnologia
BluePoint Technologies
CatEye9
Connecto
Cyberdeck
Cybertotems
Data Asia Technology
Datatrax Multimedia Systems
ELO Touchsystems
Epoint Ltd
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Horizon USA
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Korea Data Network
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Myriad Communications Ltd.

Nanonation
NCR
NeoProducts
Netkey
NetNearU
NetShift
Netyou
Olea
Papelaco
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PIX Corp.
Pixel Magic Imaging
PowerPhone Network
St. Clair Interactive
SeePoint Technology
Sriven Multitech, Ltd.
Streak Technology
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B-4-3



APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

Title: On-line Communications Terminal/Apparatus
Group Art Unit: 2743

Examiner: Stella Woo

CORRECTED CLAIMS AMENDMENT TO RCE SUBMITTED ON OCTOBER 25, 2006

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited on 11-27-06 with the US Postal Service with return Receipt requested. The envelope was addressed to:
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P.O. Box 1450 Alexandria,
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P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In response to the notification of **Non-Compliant Amendment** (37 CFR 1.121) the applicant submits the following corrected Claims Amendment. Because box 4 was checked on PTOL-324, only the corrected Claims Amendment is being provided. No fees are due since the applicant submitted the required fees with the Request for

Continued Examination on October 25, 2006

Sincerely,

B-5-1

APPN: 09/134,831 (Reissue)

Filed: August 17, 1998

Appellant: Richard P. Mettke



Richard P. Mettke

7921 Panary Court,

Reynoldsburg, OH 43068

Voice: 614-861-1847

FAX: 614-458-6446 Email: rmettke@aol.com

0-5-2



APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

CORRECTED CLAIMS AMENDMENT TO RCE SUBMITTED ON OCTOBER 25, 2006- 09/134,831 (Reissue)

Current Status of amendments. The present claims are based on an amendment filed April 17, 2000 in response to the non-final Office action mailed August 25, 1999 and an amendment filed on December 11, 2001.

Present Claims:

6. A public on-line, pay-as-you-use communications terminal comprising a housing, wherein the housing contains:
- a central processing unit (CPU);
 - a telephone access node;
 - an internal modem coupled to the CPU and telephone access node;
 - a video display monitor coupled to the CPU;
 - a keyboard for providing user interface coupled to the CPU;
 - a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;
 - means for accessing the Internet and allow for user interaction;
 - software installed into the CPU to allow interface with the Internet and credit card service centers; and
 - a printer coupled to the CPU.
7. The terminal of claim 6, wherein the means for accessing includes a touch screen interface attached to the monitor and further includes a touch screen means for accepting input information from the touch screen interface and modifying program execution accordingly terminal which communicates and controls a microprocessor.

B-5-3

8. The terminal in accordance with claim 6 also including, within said housing, program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. The terminal of claim, wherein the housing includes further including a durable enclosure for the CPU, monitor, internal modem and printer, and a secured access door for service and repair.

RCE Amended claims

Cancel Claims 7-9

Amend claim 6 as follows:

6. (Currently amended) A public on-line, ~~pay-as-you-use communications~~ Internet terminal comprising ~~a housing, wherein the housing contains:~~

a central processing unit (CPU);

~~a telephone access node;~~

~~an internal modem coupled to the CPU and telephone access node;~~

a video display monitor coupled to the CPU;

a keyboard for providing user interface coupled to the CPU;

a credit card reader swipe device coupled to the CPU for accepting payment by a user ~~for use of the terminal;~~

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

7. (Cancel) The terminal of claim 6, wherein the means for accessing includes a touch screen interface attached to the monitor and further includes a touch screen means for accepting input information from the touch screen interface and modifying program execution accordingly

B-5-4

terminal which communicates and controls a microprocessor.

8. (Cancel) The terminal in accordance with claim 6 also including, within said housing, program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. (Cancel) The terminal of claim, wherein the housing includes further including a durable enclosure for the CPU, monitor, internal modem and printer, and a secured access door for service and repair.

B-5-5



Expedited Procedure

APPN: 09/134,831 (Reissue)

Filed: August 17, 1998

Appellant: Richard P. Mettke

**Title: On-line Communications Terminal/Apparatus
Group Art Unit: 2743**

Examiner: Stella Woo

Request for Continued Examination

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Commissioner of Patents and Trademarks,
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P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In accordance with Code of Federal Regulation 37, section 1.114 and the Code of Federal Regulation 37, 41.50, I am filing a Request for Continued Examination (RCE). As a small entity, enclosed is a payment in the amount of \$395.00 as prescribed in the USPTO fee schedule as required for this action. This RCE is being filed within the prescribed two month time period requirement set forth under 37 CFR 1.1.36 (a) (1) (iv) 2004, which would be no later then October 31, 2006.

B-6-1

Reference is made to the Board of Patent Appeals and Interference (BPAI) ruling affirming the patent examiner rejections (BPAI appeal No 2006-0625, date August 31) of 35 U.S.C. § 103(a), as well as the BPAI finding additional items for rejection of obvious under 35 U.S.C. § 103(a). New and additional arguments for patentability are provided below. Because this is a reissue and reexamination action, it should be considered a special and expedited procedure.

I. Claims Amendment

Please amend my claims as follows:

Cancel Claims 7, 8 and 9

Amend Claim 6 as follows:

6. (Amended) A public on-line, pay-as-you-use Internet terminal comprising a:
a central processing unit (CPU);
a video display monitor coupled to the CPU;
a keyboard for providing user interface coupled to the CPU;
a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;
means for accessing the Internet and allow for user interaction;
software installed into the CPU to allow interface with the Internet and credit card service centers;
and a printer coupled to the CPU.

II. Summary of the BPAI Ruling:

The rejection of claims 6-9 under 35 U.S.C. § 103(a) by the Examiner were sustained by the BPAI. The rejections were affirmed in essence, because it was determined by the

BPAI that the applicant provided no reason why one skilled in the art would not have been motivated to combine the prior art references provide Internet access. The examiner (and BPAI) determined that one of ordinary skill in the art would have been motivated to provide Internet access as an additional pay-for-use service in the public kiosks of Exhibit E (attachment C) and F (attachment D) based on the teachings of Shah (exhibit D- Attachment A). Shah was relied upon for its teaching of Internet access via a kiosk. In addition the BPAI found additional New grounds of rejection have been entered as to claim 9 under 35 U.S.C. § 112, fourth paragraph, and as to claims 6-9 under 35 U.S.C. § 103(a). The applicant's arguments concerning the BPAI rejections are discussed in section IV.

III New Arguments based on the Examiners final rejection and BPAI appeal decision

Just to be clear, the rejection (35 U.S.C. § 103(a)) of the applicants reissue is based on the combination Exhibits E & F (attachments C&D) and based on the teaching of Shah (Attachment A). The additional rejections by the BPAI will be addressed later in this document. Applicant will not directly address the combination of prior art discussed above since the new argument is that the Shah abstract teaches away from accessing the Internet.

A key point here is that the examiners (and BPAI) decision was based on the Shah reference teaching accessing the Internet (in combination with Exhibit E- Attachment C & Exhibit F-Attachment D). "Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract)"

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B-6-3

The Applicant maintains and will demonstrate that the Shah teaches away from accessing the Internet. And hence should not be used as a prior art rendering the applicants application as obvious in combination with exhibits E& F. The applicant maintains that the both the Examiner and BPAI misinterpreted or misread the Shah abstract. The Shah abstract does not teach accessing the Internet. It teaches away from accessing the Internet. The applicant will demonstrate this in the following analysis of the Shah Abstract.

Analysis of the Shah abstract-

Summary- The Shah abstract teaches using a World Wide Web type "interface" (or browser)(**Emphasis added**) as part of an information kiosk system. Below is a "cut-and-paste" of the Shah relied upon abstract paragraphs with an interpretation and comments.

The first paragraph calls out the systems that he is referencing are "kiosk based"

- ° The second paragraph talks about how the Internets World Wide Web has provided the internet with easy interface (**emphasis added**)
- ° The third paragraph talks about the requirements that that an information kiosk system based upon the World Wide Web must have. Hence, it talks about a Kiosk-based information system based upon the World Wide Web in the context of a type of user interface (**emphasis added**) to be used in another application, not accessing the Internet.
- ° Another key point

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

World Wide Web has provided the Internet with an easy interface superceding access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Below is a cut-and-paste of the Shah "Introduction" in the relied upon abstract.

- Again, in the introduction Shah talks about user-friendly interfaces. He means the design of the World Wide Web interface; the browser (not accessing the Internet).
- Another key point in understanding the abstract is Shah's reference to Kiosk-based Information systems, not Internet based or accessible. Explicit that they are not connected to the internet, nor suggest it.

Introduction

Kiosk-based Information system has many requirements to create the most-user friendly interface while maintaining security and functionality. *User friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

Below is a cut-and- paste of the next Shah abstract paragraph.

They key to understanding/interpreting this paragraph is in the first paragraph.

Shah asks the question is why one would use the World Wide Web as a design for a

kiosk-based information system. Key points are World Wide Web as a **design**

(emphasis added) and for a Kiosk- based information system. Not Internet access.

He goes on to talk about how the web and its capabilities (reference to the Browser or interface) are a standard on the Internet.

When he is talking about the Web, he clearly is talking about the Web and it's user

0-6-5

interface. This paragraph has the only mention of the Internet in Shah's abstract. And it is only in the context of the Web (Browser) and its success on the Internet, not accessing the Internet

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Below is a cut-and- paste of the next Shah abstract paragraph.

Shah talks about interest in the World Wide Web. Then he goes on to talk about the various browsers. In context, he is talking about the functionality of the browsers. Not interfacing or accessing the Internet. And then he goes on to talk about who may have an interest in a "kiosk based" information system (emphasis added).

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example hotels, amusement parks, shopping malls, etc.

B-6-6

- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organization who wish to provide a paid service through kiosks

Below is a cut-and-paste of the next Shah abstract paragraph.

Here Shah talks about the recommended user interface of the Browser.

User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage session's counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. If this were indeed an Internet accessible system, there would be no need for servers. He talks about connecting to a network and stand-alone systems with no network interface. So, at the most what he discusses is a Local Areas Network (LAN). Emphasis added. Not accessing the Internet (Emphasis added).

The Server.

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

B-6-7

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used. Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about

servers. This is probably the most important paragraph in my claim that the Shah abstract teaches away from accessing that the Internet. Here is where he talks about the functionality of the kiosk- based Information system that he describes. Again, he talks about servers networked (LAN) providing the information. Not the Internet. If the system had functionality with the Internet it would have been in this paragraph.

Functionality

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemap are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. Her Shah talks about storage of data and associated problems. If this were Internet based or assessable this would not be an issue. He also talks about a the problems associated with local Kiosks (not networked)

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual

computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about

security. Shah talks about security of stand-alone and networked systems

Again, when networked, it's a LAN. When standing alone all information is contained on the Kiosks. No mention of Internet access or interface.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc, operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often.... (Article cuts off here. But irrelevant...)

No comments on the last paragraph.

Control

Control involves the access to the Server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied is very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific access to documents or services. The concept of registered users and billing may be built in to the server.

In summary, the Shah abstract teaches using the World Wide Web "interface design" (browser) on a stand-alone (local) or networked (LAN). Therefore, it clearly teaches away from accessing the Internet. As the Shah prior art was the main reference that examiner (and BPAI) decided was rendering the applicant application obvious (because it teaches accessing the internet), when combined with Exhibits E and F. The Shah abstract does not teach, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. The analysis provided above clearly demonstrates this fact. The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action and appeal brief to the BPAI. Because of the amended claims, the applicant does not discuss the rejections directed towards the other claims.

IV Arguments based on the BPAI rejections

The BPAI found additional grounds for rejection. Claims 6-9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

The BPAI also concluded that the following references were prior art:

B-6-9

- TOUCHFAX AMERICA, video tape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex in Atlanta, Georgia, 1993 TouchFax Information Services, Inc., (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA).
- Deposition of Daniel Toughey in Mettke v. TouchNet, No. CV-98-PT-596-E, pp. 40-53, discussing Exhibit 5 to deposition, Pages 40-53
- TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).
- Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).
- VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (° 1991) (Exhibit F to TouchNet Protest).
- Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA) (hereinafter "L&G ISDN console").
- Paul Gilster, The Internet Navigator (2d ed. John Wiley & Sons, Inc. 1994⁶), pp. 15-18, 24, 25, 56, 57, 195, 221-225 (hereinafter "Internet Navigator").
- Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. cover, index (2 pages), 82-84 (hereinafter "Aliens").
- On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis (hereinafter "On Haiti").

B-6-10

Prior Art Discussion:

The applicant disagrees that "TOUCHFAX AMERICA, video tape recorded May 14, (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA)" is prior art. The video tape is clearly a concept, experimental, an idea and marketing tool. Not permitted in prior art. The examiner rightfully excluded it in an Office Action dated August 24 1999, page 8, 3rd paragraph". Although Exhibit C, 4 shows a frame from the video tape of exhibit C advertising connection to the Internet, it was stated in the deposition Daniel J. Toughey (attachment, pages 14-15) that the terminal shown in the video tape did not actually enable a user to gain access or interface with the Internet. This alone should have negated its use as prior art. The applicant also disagrees that TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest) is prior art. In his deposition (attachment I, page 22 & 98), Mr. Toughey states specifically that in 1991 (the time the document was distributed), the terminals did not have access to the Internet, Prodigy and CompuServe. Again, a concept, experimental, an idea and marketing tool. Not permitted in prior art. This alone should have negated its use as prior art. Probable utility does not establish practical utility. Because the applicant has amended the claims, he will only address those rejections that are related to the amended claim 6.

The BPAI rejected claims 6-9 under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

B-6-11

The BPAI states that in Exhibit E it states that "The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (page 31, line 16 of BPAI decision) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax terminals to provide public online services and public Internet access as those features became common at home and business."

The applicant does not understand how this is a "suggestion to modify" a TouchFax terminal to include Internet access and interface. The only suggestion would be if they (Touchfax) saw the applicant's disclosure and added this capability to their terminal. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of his deposition, June 16, 1998 , no Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15, 44). This is three and a half years after the applicant's disclosure on January 23, 1995. This clearly points to nonobvious and demonstrates a lack of suggestion, teaching or motivation.

The BPAI suggests that the motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all of the exhibits are from the same corporation, TouchFax, and expressly teach modifications.

The applicant respectfully disagrees that there is motivation to combine Exhibits C, D, E, and F and that they expressly teach the modifications to add Internet access and interface on a point-of-sale basis. The BPAI does not "show" objectively how the references teach this modification other than seeing the applicant's disclosure in January 1995.

B-6-12

Mr. Massey's statements that they (exhibits E & F) have the capability to expand or modify the terminal applications to "meet customers needs" are indefinite and probable. Of course he is going to say this when he is under going a litigation deposition. There is no corroboration of his statements. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access or interface with the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of the deposition, June 16, 1998, no Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15,44). This was three and half years after the applicant's disclosure and clearly points to **unobviousness**.

I would like to point out that there are distinct and clear difference's between Commercial On-line Services (AOL, Prodigy, CompuServe,etc) and the Internet. The BPAI has for the most part adequately defined them. I shall not repeat the descriptions here.

I will take exception to their interpretation of access (and interface; which was not addressed in the email analysis) to the Intranet. The BPAI stated that because some of the Commercial On-line services provided the email provided access to the Internet via e-mail. The board stated on page 47 (BPAI decision), that the claims recite access to the Internet are met by access to one service on the Internet, such as e-mail. The board also states that email through a Commercial On-line service provider that uses the Internet to send qualifies as "access to the Internet". What about interface?

The applicant respectfully disagrees that accessing on-line service providers qualify as Internet access and interface. Claim 6 states "accessing the Internet " as well as

interfacing with the Intranet. My claims do not say that you have to go through the method of point A (commercial on-line service) and B (send an email) and then point C email goes through the back office on-line service propriety architecture and may or may not be sent over the Internet. Clearly the claims in 6 say access and interface with the Internet. You either have access and interface or not. This an area that the applicant feels is clear a case of blue printing by the BPAI; using my disclosure to put together pieces of prior art to teach my claims.

On Haiti describes that "'Cyberia' -- a 'cyberspace cafe' --has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour."

On Haiti has 26 words in the article. There is not enough information to assess this prior art. There is not enough detail that discloses the structure, interface, and processes for this reference to be applied as prior art. Let alone suggesting, teaching or showing motivation to combine. Regardless, the BPAI has not provided any clear specific evidence to support the combination or modification as they suggest.

The Landis & Gyr, ISDN console, Public telephone and telematic console. The examiner had reviewed; this relied upon prior art by the BPAI. In an Office Action Summary, dated August 24, 1999, the Examiner stated on page 8- 9, ".they lack certain elements in the claims, such as a printer, touch screen interface and Internet access." Hence it was not relied on prior art. The applicant agrees.

The scope of the invention Arguments

The BPAI defined the applicant's field of endeavor as a pay-per-use public communication terminal, and the particular problem with which the invention was concerned with was

B-6-14

providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals. The BPAI also said the references were within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access and interface or as pay-as you-use application.

The applicant respectfully disagrees that the terminals listed above (Exhibits C, D, E, F, L&G ISDN console) are within the field of endeavor (nor are they pertinent) to the matter at hand. They are not analogous art. None solve the problem of accessing the Internet or interface as the applicant's claims represent. If the terminals accessed the Internet (the problem that the applicant solves), allowed for interface on a point-of-sale basis, then they may have been pertinent and relating to the applicants field of endeavor. The BPAI use of Public Communications terminal is too broad as a field of endeavor. Communications relates to many sub areas, facsimile machines, telephones, televisions, cellular phone and global positioning systems just to mention some of the areas.

The BPAI brief states" Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet.

B-26-15

It has been proven by statements in a deposition by Mr. Toughey, (Attachment I, pages 14-15,44), that the terminal in Exhibit C did not access or interface with the Internet. That the tape was a vision or concept. Also, in his deposition he stated that as of the date of the deposition (June 16, 1998), 3 ½ years after the applicants disclosure, that the referenced Touchfax terminals still did not have the capability to access and interface with the Internet as in the applicant's claims. So, how could it be a later improvement as stated by the BPAI? Applicant fails to see how exhibit C "demonstrates" that the terminal "can" be built. Particularly when the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet, as previously mentioned in his deposition as late as June 1998. Furthermore, the applicant fails to see any objective or specific reasons provided by the BPAI as to how exhibits C, E and F show motivation to add Internet access and interface. Again, the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998 and exhibit C was a marketing tool and concept. Probable utility is not practical utility.

The BPAI brief states that" Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides **the express** suggestion to modify Exhibits E and F to provide access to online service providers.

Regardless of the BPAI interpretation of what qualifies for Internet access, the *Internet Navigator* clearly points out, on-line service providers are not the Internet (page 57). As previously discussed, Touchfax representatives stated (in a deposition) that in 1991, the

B-6-16

date of the publication, that they did not have access to on-line services such as Prodigy and CompuServe. This should have negated this document as any type of reference. The BPAI stated that they approached "the obviousness issue from two directions. First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we **then show why it would have been obvious** to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer. Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a videotape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet. Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

B-6-17

On Haiti discloses charging for use of a public computer terminal to access to the Internet.

One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

The applicant fails to see any motivation, teaching or desirability to combine the references as shown; to teach the applicants claims. Nor does the applicant see how one skilled in the art would have been motivated by the BPAI reasoning for obviousness described above. The BPAI states that they are not relying on Exhibit C as a main reference, but ties it in with Exhibits D, E&F and On Haiti. The applicant fails to see how there can be an "express suggestion" to use Exhibit C, D, E & F in a combination to modify. As previously mentioned, Exhibit C was marketing tool and concept, not a capability. The owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998. Also as previously mentioned, Exhibit D did not have the all the capabilities listed on it in 1991, particularly access to on-line services. Exhibit D was simply a concept or idea, a listing of capabilities that that did not exist at the time (1991). This was stated in a deposition by the owner of Touchfax ((Attchmnet I, pages 22&98).

V. Remarks

The BPAI has not shown any objective or specific teaching, suggestion or motivation as to why someone skilled in the art would combine the prior art references to yield what is in the applicant's disclosure, of January 1995, even though they approached the obvious analysis from two different avenues. The applicant clear shows why in this RCE. The applicant feels that the BPAI used the applicant's disclosure to blue print pieces of prior

art to defeat patentability. This has been clearly shown in the above arguments. As demonstrated in the applicant's arguments, the BPAI decision appears to be a discussion of the ways multiple art references can be read on the claimed invention in January 1995.

The BPAI has failed to show any pertinent desirability that would suggest, teach or motivate the combination of the relied on prior art that would produce the results in the applicant's claims, disclosed in January 1995.

The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action and appeal brief to the BPAI, as well as the BPAI rejections of obviousness to issue an allowance.

Sincerely,



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ATTACHMENTS:

B-619

Attachment A- Rawn Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.)

Attachment B- Black and white copies of Exhibits C,1 to C, 6, which are copies of frames from TOUCHFAX AMERICA, video tape recorded May 14, 1993. TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).

Attachment C- Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).

Attachment D- VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).

Attachment E- TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).

Attachment F- Paul Gilster, The Internet Navigator (2d ed., John Wiley & Sons, Inc. 1994), pp. 15-18, 24, 25, 56, 57, 195, 221-225.

Attachment G- Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. 82-84.

Attachment H -On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis.

Attachment I- Deposition of Daniel Toughey in Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed June 16, 1998), Pages 1-3,14-15, 22,44 & 98

Suggestions for Information Kiosk Systems using the World Wide Web

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The World Wide Web Information Kiosks Special Interest Group

30 April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superceeding other access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Introduction

A Kiosk-based Information system has many requirements to create the most user-friendly interface while maintaining security and functionality. *User-friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.
- EXHIBIT**

EXHIBIT

Attachment A

B-6-21

- a multimedia tool is the primary type of program used by information systems because of the combination of text, graphics and sound are more appealing. The many different Web browsers have these capabilities already.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

"Web Design"

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such kiosks.

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as $t = \infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

B-6-22

The following are suggested requirements for an access interface based upon the above suggestions:

• Physical Requirements

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

• User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

The Server

There are also suggested requirements for the Server program for these information kiosk systems.

Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Functionality

B-6-23

Functionality of the server is key to its success. The more special functions it serves and the greater the extensibility of the server program, the better its chances of success as a popular system.

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently not a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

B-6-24

contain restricted documents but data managers may wish to restrict certain areas of their Web space dependent upon their own criteria.

Control

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

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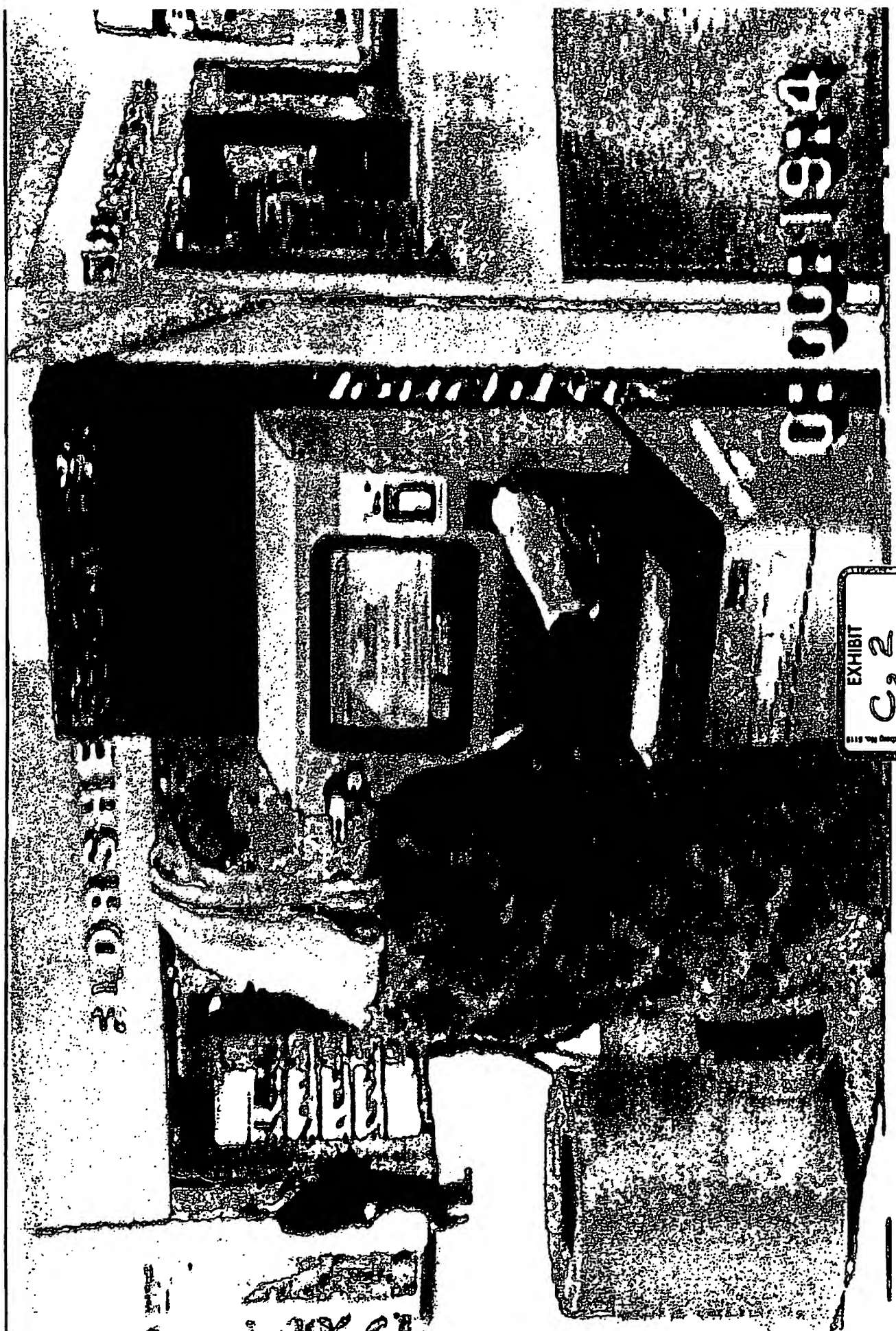
B-6-25

PLAY TOUCHTONE: 0:08
Information Systems, Inc.
TOUCHIFAX AMERICA

IRI: 1:20
WITH MUSIC
Audio: Mono

Recorded: 5-14-93
VPR Creative Group: 01:4

EXHIBIT
C, I



B-6-27

TouchFon
NEO

1 Main Menu

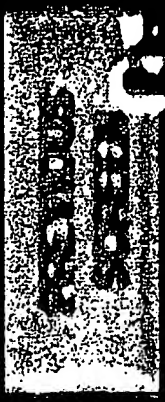
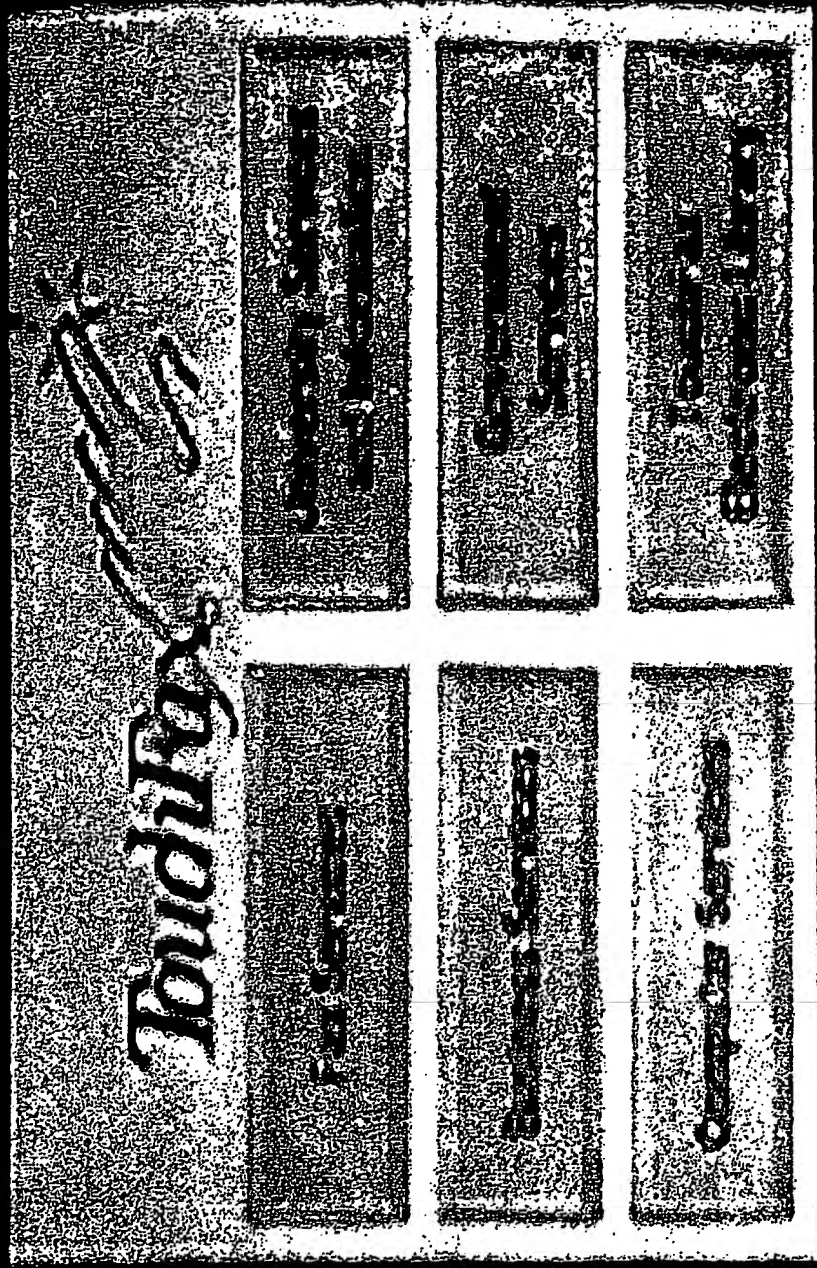
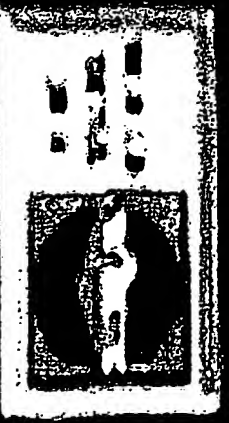


EXHIBIT
C, 3

0:00:25:15

B-6-28

Hi-Mall

Internet

92043433

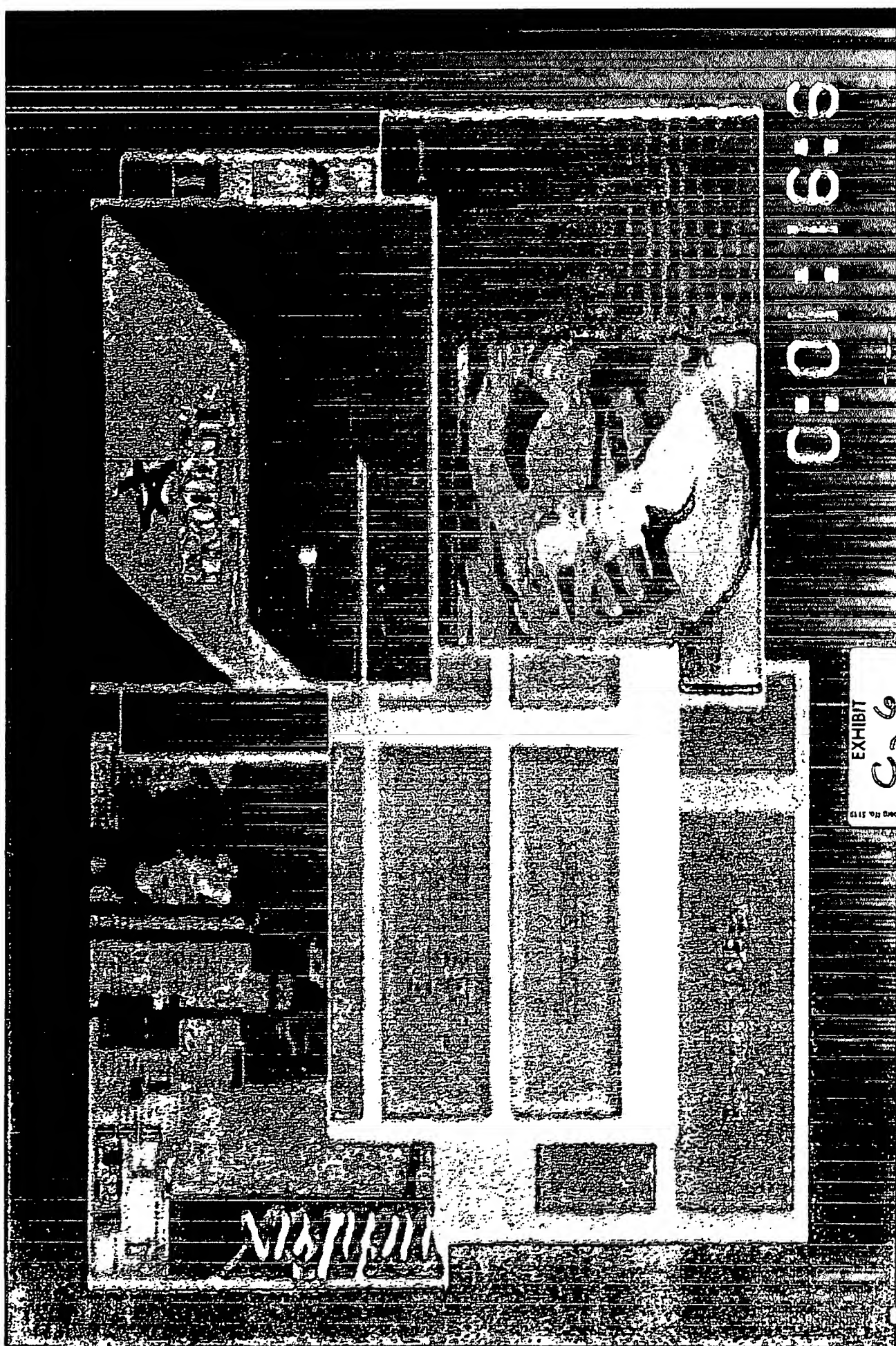
EXHIBIT

C, 4

B-6-29



B-6-30



B-C-31

TouchFax

TouchFax Provides The Ultimate In Place-Based Interactivity

By Allen Weiner, Editor



If you think of TouchFax Information Services, Inc., as a company that manufactures public fax machines, you have only part of the picture. In the rapidly growing arena of place-based media, TouchFax is creating products that will allow consumers the same sort of interactive capabilities as they will have with their home-based interactive appliances.

"We believe the information for the machine can be strategically designed for the location type so the type of services and the type of information that can be retrieved interactively on our terminals can be totally different from one machine to another," says John Massey, the machine's creator and chairman of the Lenexa, Kan.-based company.

"We always will have a basic set of common services that are available on all machines," he adds. "But, particular machines will have unique sets of advertisements and promotions on them, as well as related services that relate to the type of people that frequent a particular type of location."

And locations are key to the TouchFax family of products. Massey believes they are best utilized in places where "a number of different types of users can interact with their desired and preferred telecommunications service." Airports, hotels, truck stops, apartment complexes and even supermarkets are ideal for these multi-functional, multimedia machines.

TouchFax hardware products include three models of public terminals used initially as pay-per-use fax machines. They also can provide other services such as word processing and high-quality copies in addition to its primary communications capability of phone, fax and computer. Service products include personal fax mailboxes and information services which may be accessed by TouchFax public terminals and any private fax machines.

The TF Series public terminals are location specific and are designed to meet the space in which they will reside. For example, a lower cost unit designed for lower traffic locations also has a smaller paper storage capacity and would require more frequent service calls if placed in a high traffic location.

All TouchFax terminals use proprietary

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Attachment C 1

EXHIBIT
E

B-6-32

software to create an easy-to-use visual control panel. This user interface to the machine is displayed on a touch-sensitive color video monitor which provides instructions to the user and on-screen buttons to operate the terminal functions.

Documents to be sent are scanned on a jam-proof flatbed scanning device which operates much like a standard copy machine. Payment for services is made by using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping.

"It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

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TouchFax's TF750 is a free-standing kiosk with a high-resolution, 14-inch color touchscreen monitor, 386 microprocessor, high-volume laser printer, full-size keyboard and data port for modem and laptop connections. The TF450 is a built-in, wall-mounted unit that has an optional floor mount and offers the data ports for modem and laptop connections on an optional basis. The TF200 is a built-in, wall-mounted unit that offers a laser printer as an upgraded feature.

TouchFax offers two service products which adds to its flexibility—a fax mailbox service and electronic library. The TouchFax Mailbox is a centrally managed electronic service capable of storing fax messages. Mailbox subscribers are given a personal phone number to allow fax messages to be sent to their mailboxes, stored in the mailbox and retrieved at any time. To retrieve stored messages, the subscriber calls his mailbox number, enters a Personal Identification Number, enters the fax destination number and the system forwards the stored fax messages as instructed.

The TouchFax Electronic Library is a collection of information products organized by category. These information products are made available by combining information databases and high-resolution fax printer output with the ease of remote telephone communications. Information products are available on TouchFax public terminals and from any private fax machine.

On a TouchFax public terminal, the touchscreen provides an interactive dialog between the consumer and the information provider. For example, a consumer can select OAG FlightFax to get up-to-the-minute flight information, seat availability and fares. The consumer is guided through a series of video screens requesting their specific flight schedule. The TouchFax public terminal then sends the information via computer modem to OAG's database and a one-page personalized report is delivered to the TouchFax terminal by facsimile.

To access the TouchFax Electronic Library from your home or office requires a touch-tone telephone. A user responds to a series of audio prompts and directs the document to his home or office fax machine. For example, consumers can define the content of an up-to-the-minute special interest newsletter compiled from the news resources of *USA Today*.

Users also can request details of forecasters weather conditions in their destination city, maps and directions to specific locations, as well as city guides with suggestions on where to dine and what to see. Other services are oriented specifically toward entertainment and include popular business book summaries, personalized cartoon fax messages and event schedules.

In essence, TouchFax provides the future interactive appliance user a similar service to what he will be able to access with his Interactive Video Data Service terminal, touchscreen telephone or interactive cable device. So, home or away, the consumer can be interactive.

"The TouchFax is designed to emulate exactly what a person will be able to use in their homes," says Massey. "It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

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READER SERVICE NO. 29

October 1992 • INTERACTIVE WORLD • 49

2

B-6-33

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B-6-34

VISION...

Leaders see the possibilities before they become obvious. The TF700 is designed with the understanding that the information age is just beginning. It incorporates the latest technology into an integrated system that can meet the communications needs of today and tomorrow.

POWER...

Every leader has a great mind. The "mind" of the TF700 is a powerful hardware/software system engineered to provide a comprehensive set of communication functions. TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location. The TF700 has the additional power to access other computer systems and enhanced fax services like our own InfoTouch™ electronic library.

VERSATILITY...

Leaders stay responsive to changing circumstances. The TF700 is a versatile platform that can adapt to take advantage of new technologies and opportunities, while meeting many present needs.

~~~~~Public Fax has arrived.

The TF700 is the most complete solution to the needs of the rapidly growing public fax market. It provides high quality fax, jam-free operation and plain paper output in a convenient, self-service terminal.

-----Information Access is the key.

The TF700's self-instructing touchscreen interface encourages the general public to utilize the many information databases available.

~~~~~Word Processing is a plus.

The full-sized keyboard offers the business traveler the perfect solution to composing and printing a letter or even personalizing a greeting card.

.....Video Advertising works.

The TF700's high-resolution color monitor provides a powerful medium to deliver advertising messages. In addition, each video ad screen can be linked to a printed coupon or sales literature that is instantly printed and delivered at the touch of a button.

TF

THE PUBLIC COMMUNICATIONS TERMINAL
OF TOMORROW... FOR INDUSTRY LEADERS TODAY.

TouchFax

INFORMATION
SYSTEMS, INC.

15520 College Boulevard, Lenexa, Kansas 66219
Phone: (913) 599-6699 (800) 669-TFAX (8329) Fax: (913) 599-5588

Exclusive European Distributor: Landis & Gyr Communications (Switzerland) Corp.
Grand Pré 70, CH-1211 Geneva 16
Tel.: 022 733 55 00 Telex: 022 733 52 19 Telen: 751 703

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B-6-35

and quality built into them. TF700 Public Communications Terminal from TouchFax.

The demand for public communication services is growing. Many of the largest telecommunications companies in the world have seen the handwriting on the wall. Several industry leaders have already responded by selecting TouchFax as their product of choice.

In the new TF700, TouchFax has combined precision engineering and powerful functionality to create the industry's most advanced personal communication center. At the touch of a few buttons, the new TF700 can put anyone in touch with the world through an extensive menu of essential services including:

telephone send or receive a fax, photocopying, word processing, and laser printing, and access to a growing network of information databases from Wall Street news to international sports scores.

Handset and Hookswitch
are AT&T quality, delivering high performance and durability.

External Speaker
gives clear audio feedback of busy signals, fax tones, or voice prompts.

Access Door
provides convenient access to internal components, extra paper and supplies.

Ergonomically Designed Cabinet
with heavy-duty steel construction comes in a variety of finishes. Custom colors are available.



TF

Public Communications Terminal

14" Color TouchScreen Monitor
offers unrivaled ease of use and displays information and ads in sharp, brilliant colors.

Credit Card Reader
accepts major credit cards, phone cards, and can be programmed to accept custom cards.

Full-sized Keyboard
extends the computer database access for word processing, and retracts when not in use.

Option Panels
supplement floppy disk drive, optical card reader, laptop or modem connections.

300-DPI Flatbed Scanner
delivers high resolution with jam-free, photocopy-like operation. Includes a 40 megabyte hard drive, proprietary control interface and integrated fax and data/modem capabilities.

300-DPI Laser Printer
offers crisp, high-resolution printing on plain paper and an optional 700 sheet paper tray.

Compact Footprint
of just 24"W X 28"D lets the TF700 fit in almost anywhere.

TouchFax is a registered trademark. © 1991 TouchFax.

Touch

The Leader in Public Communications Systems

Now the information age is for everyone. The TF700 provides a friendly, touchscreen window to a universe of information available from on-line computer and fax information services. Never before has the public had easier access to such a wide range of printed information.

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Attachment D-

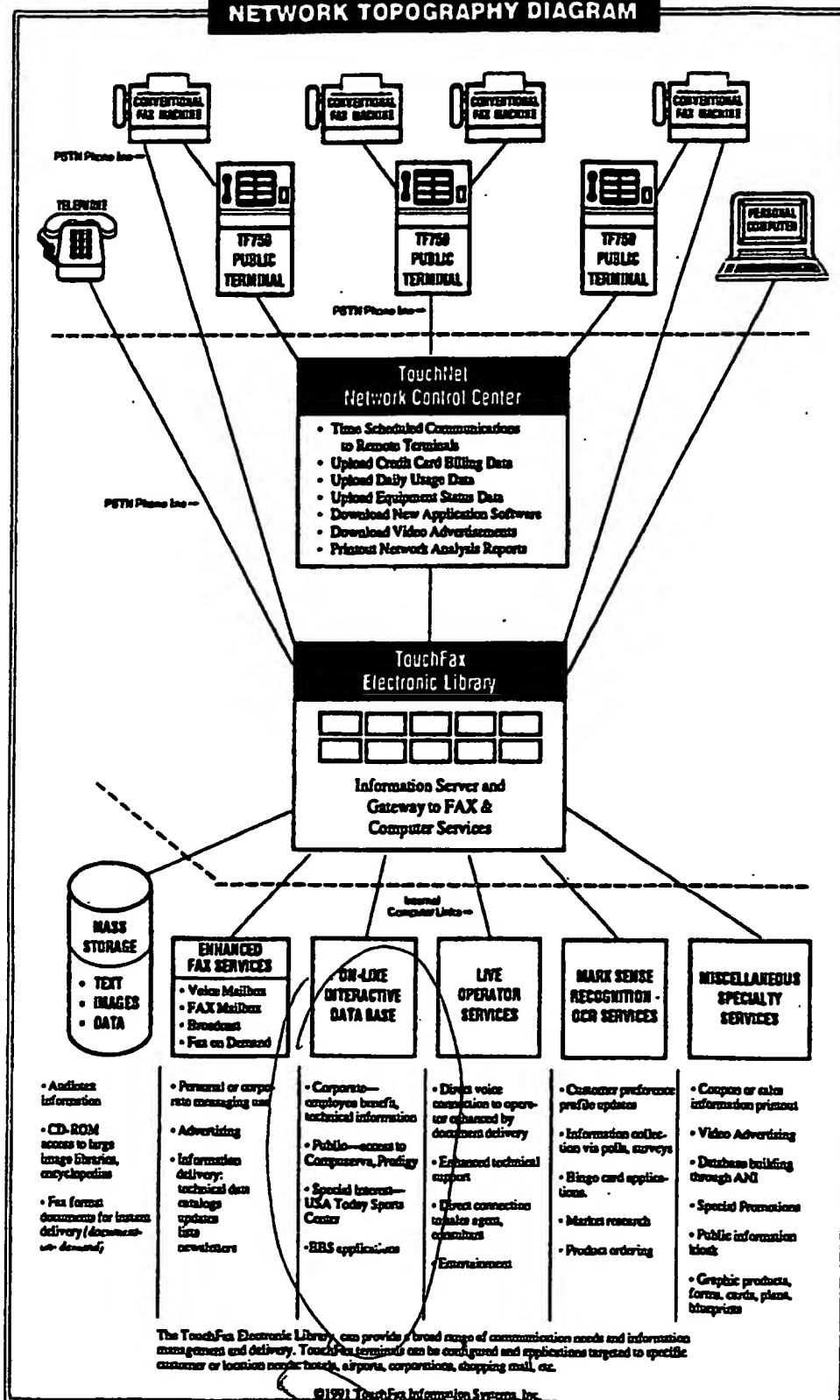
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TouchFax

NETWORK TOPOGRAPHY DIAGRAM



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ATTACHMENT

EXHIBIT

D

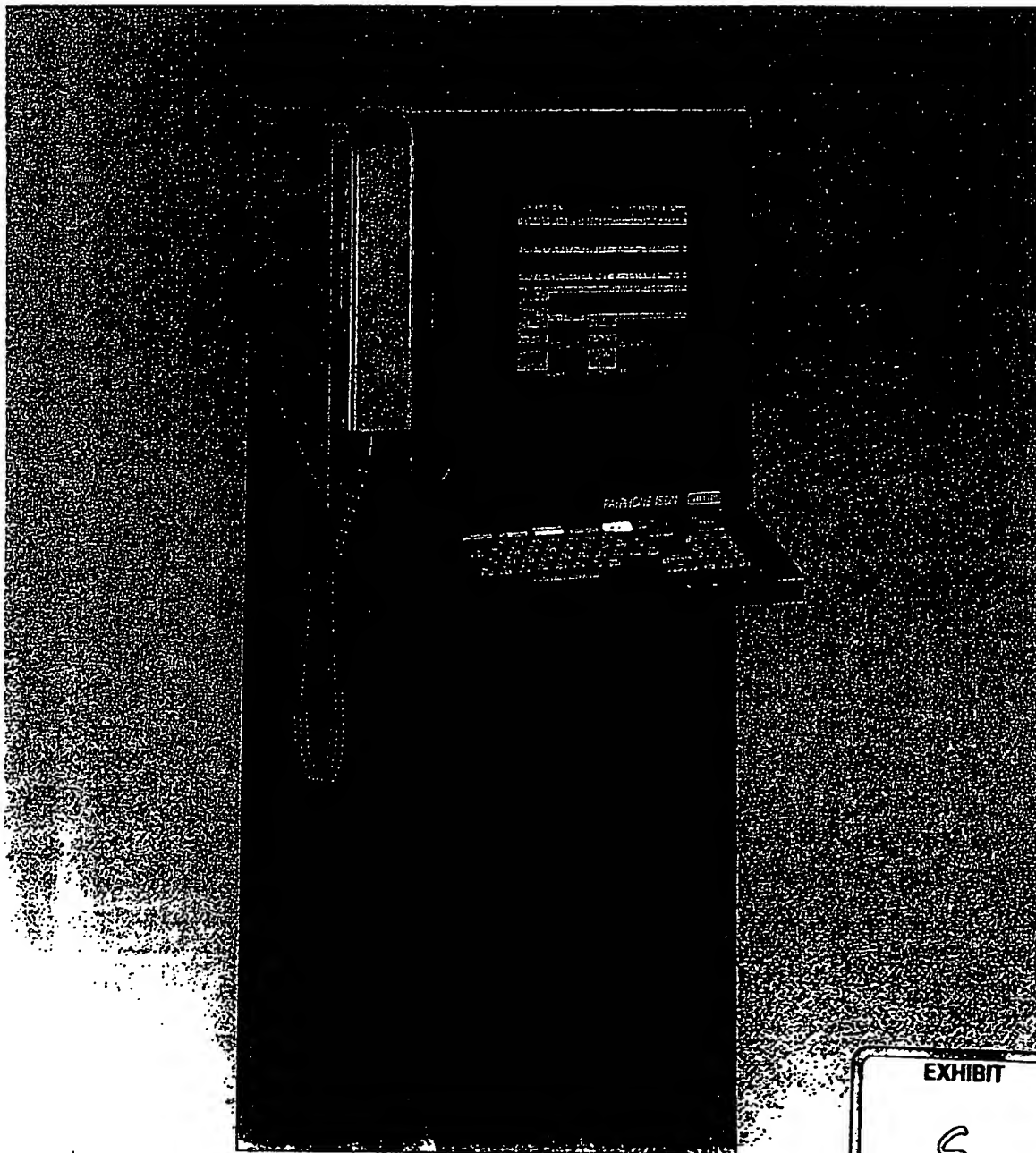
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B-6-38

LANDIS & GYR

ISDN console

Public telephone and telematic console



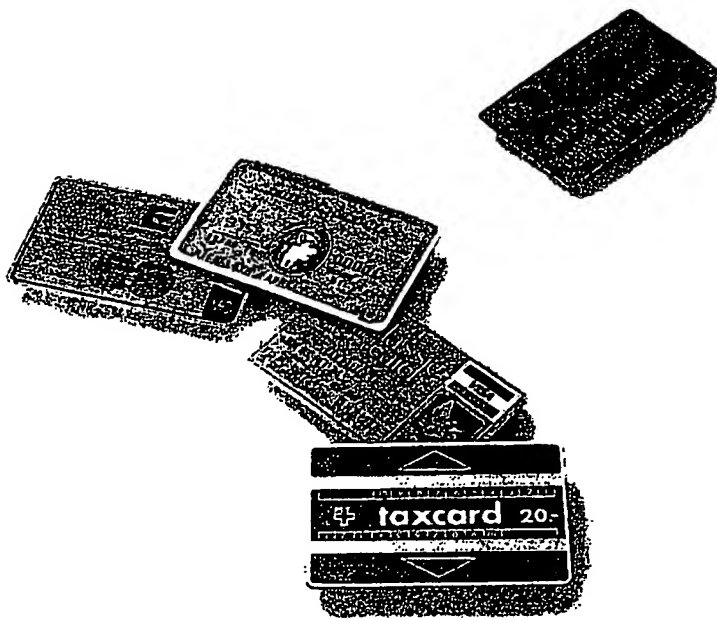
EXHIBIT

C

ALL-STATE® INTERNATIONAL

Attachment F -

B-6-39



Multiplicity of services offered

New services are offered to the user.

- Consultation of Videotex type data bases on the colour screen
- Possibility of connecting a portable personal computer to the telematic console by means of a special infra-red connector, thus providing the possibility of accessing specialized data networks.
- Increased help for the user by the display of instructions and menus on the screen, presented interactively and clear identification of the selections by means of special coloured keys.
- Digital telephone, providing a quality that is superior to that of a conventional analogue telephone together with a shorter time for putting the call through.

- Access to various new services and information sources
- Possibility of accessing a system operator specific data base
- Practical means of payment by means of cards
- Possibility of connecting a portable computer

Motivated by its policy of continuous innovation in telephone equipment, Landis & Gyr presents an advanced public telephone and telematic console, which illustrates the extensive range of services offered and whose role is to promote modern means of communication in crowded public places.

The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal.

Videotex

The user has no difficulty in accessing the Videotex services available to the general public (also called Minitel, Prestel and Bildschirmtext, depending on the country).

These services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour.

The various services already available include:

- Electronic telephone directory
- Electronic mailbox
- Telex transmission

Means of payment

Any of the main types of cards currently in use may be employed, namely:

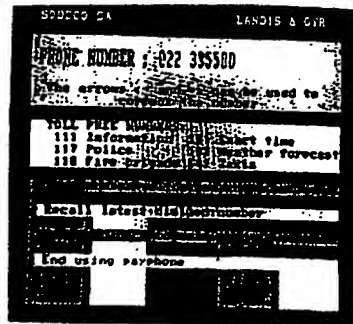
- The Landis & Gyr optically coded pre-paid value card,
- The «smartcard» (card with microprocessor chip) or
- The commercial magnetic credit card

For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.

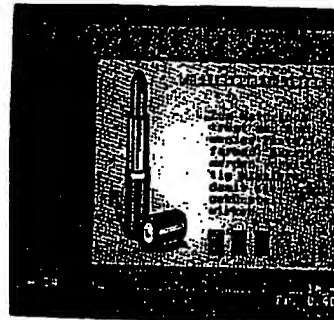
B-6-40

B-6 41

- Timetables of means of transport
- Reservation of seats with certain airlines
- Reservation of hotel rooms, hire cars, places for cultural and sporting events
- Teleshopping
- Telebanking



Main menu — a colour is attributed to each choice; pressing the key of the same colour on the keyboard causes selection of the desired function



The Videotex standard enables pages with a high degree of graphics to be created.



Data base specific to the system operator

In addition to the Videotex data base, the user also has access to a specific data base, restricted to the users of Landis & Gyr ISDN consoles. This private data base, when it is installed, offers services restricted to a definite geographic region,

for example: nearest chemists, street directory, proposed route to reach a given address, nearest bus stops, etc.

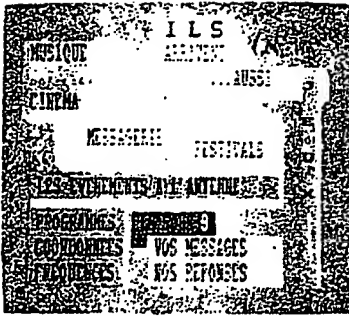
An easily used source of local information is thus available to travellers and tourists.

Use of a portable personal computer

The Landis & Gyr ISDN console makes it possible to link up to a computer centre from a public place.

The services accessible from a portable personal computer are those that are currently accessible via the specialized data networks, termed packet switching networks or type X.25 networks.

B-6-42



Page for accessing the Videotex server of a local radio station

These services may be classified in two categories:

- ❑ Link up to a private central computer and use of the portable terminal as a remote terminal to transfer data or carry out any other operation on the central computer (e. g. transfer of the orders obtained during the day, from the memory of a commercial traveler's portable computer to the central computer of the company).
- ❑ Connection to value-added services available on host computers (e. g. private electronic mailboxes, reference library data banks).

Profitability

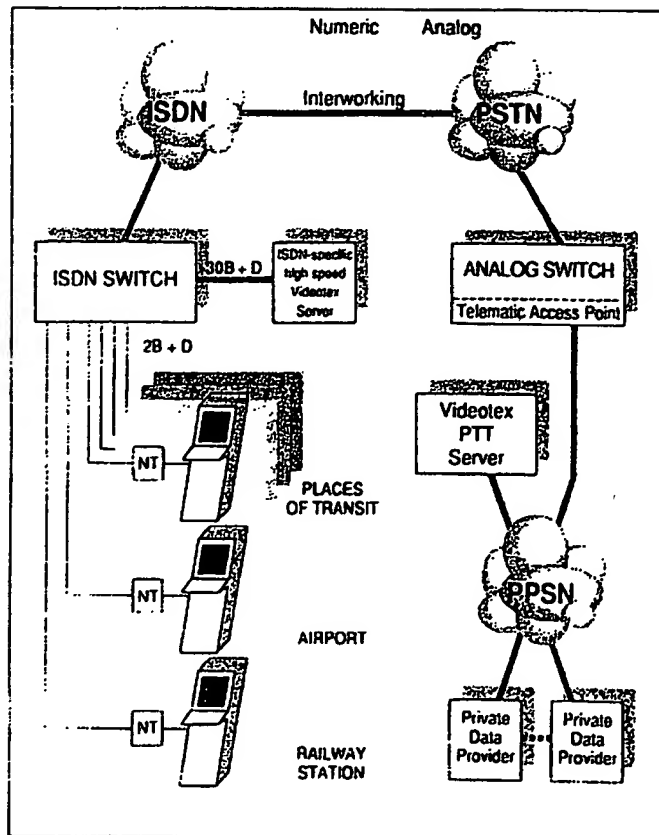
The operator of a system of Landis & Gyr ISDN consoles has considerable scope for making the investment profitable within a very short time:

- ❑ He may make a "private" data base service available to the public on a payment basis (value added service).
- ❑ He may also use the screen of the ISDN console for advertising purposes. It should be noted that when the screen of the Landis & Gyr ISDN console is not in use, which is the case in particular if the user is only making a voice communication, the operator may cause pages of advertising material to scroll past on the screen. These advertising pages are generated by

the system operator at a distance and then loaded via the network. They may include a high proportion of graphics so as to achieve maximum visual impact.

Maintenance

Landis & Gyr has applied the concept of remote maintenance to its ISDN consoles. This concept has already proved its value in the range of conventional telephone stations (BTG Remote Management Systems).



B-6-43

IS[

Put



**Technical characteristics of
the Landis & Gyr ISDN console**

- Access to the ISDN S bus, with possibility of use in a multi-point configuration
- Management of communication protocol on ISDN channel D (LAP-D and Layer 3, according to I.441 and I.451)
- During transmission of data on channel B, use of the X.25 protocol (LAP-B, Layer 3 X.25)
- Access to non-ISDN Videotext type information providers, by means of a TA a/b adaptor, installed as an option
- Once the possibility of user data transfer on channel D is provided, this service will be made available, in particular for administration of calls made on credit.
- Access to certain additional ISDN services, such as call back, multi-party conference calls, provided these services are available on the network.
- Multiple means of payment:
Landis & Gyr prepaid value cards
Cards incorporating a microprocessor chip (=Smartcards=)
Magnetic commercial credit cards
- Installation on semi-protected public sites
- Overall dimensions: 49x36x130 cm
- 9" colour screen
- Supplied from the mains

B-6-44

Africa	Landis & Gyr, 9 av. Houdaille, 01-BP 8629, Abidjan 01, Côte d'Ivoire, Tel.: 32 63 79, Tx: 22 457, Fax: 326319
Austria	Landis & Gyr GmbH, Breitenfurterstr. 148, Postfach 9, A-1231 Wien, Tel.: 0222/84 26 26, Tx: 132 7 08, Fax: 222/84 26 26 313
Belgium	Landis & Gyr SA/NV, Av. des Anciens Combattants 190, Oud-strijderslaan 190, B-Bruxelles/Brussel, Tel.: 02/244 02 11, Tx: 65 630, Fax: 02/242 88 31
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Ireland	Lake Electronic, Beech House, Greenhills Road, Dublin 24, Ireland, Tel.: 353-1-515422, Tx: 30542, Fax: 01/520 826
Italy	Landis & Gyr SpA, Divisione Commerciale, Via P. Rondini 1, I-20146 Milano, Tel.: 02/42481, Tx: 332 142, Fax: 2/48300773
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Norway	Landis & Gyr A/S, Caspar Stormsvei 16, P. B. 6395 Etterstad, N-0604 Oslo 8, Tel.: 02/65 10 30, Tx: 78 346, Fax: 02/64 81 87
Portugal	Landis & Gyr LDA, Rua Filipe da Mata nr. 66-1, P-1600 Lisboa, Tel.: 01/76 83 82, Tx: 13 696, Fax: 01/784 203
South-East Asia	Landis & Gyr (S.E.A.) PTE LTD., 460 Alexandra Road 22-03, PSA Building, Singapore 0511, Tel.: 273 51 51, Tx: 55 782, Fax: 273 25 25
Spain	Landis & Gyr BC S.A. Batalla del Salado 25, E-28045 Madrid, Tel.: 1/467 19 00, Tx: 22875, Fax: 1/239 44 79
Sweden	Beving Elektronik AB, St. Eriksgatan 113A, Box 21104, S-10031 Stockholm, Tel.: 08/15 17 80, Tx: 10040, Fax: 336 863
Switzerland	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 18, Tel.: 022/733 55 00, Tx: 751 703, Fax: 022/733 52 19
United States	Landis & Gyr, Inc., 8 Skyline Drive, Hawthorne, New York 10532, Tel.: 914/347 26 30, Fax: 914/347 26 41
Other countries	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 18, Tel.: 022/733 55 00, Tx: 751 703, Fax: 022/733 52 19

LANDIS & GYR

B-6-45



THE INTERNET NAVIGATOR

SECOND EDITION

Paul Gilster

SCIENTIFIC & TECHNICAL
INFORMATION CENTER

FEB 25 1997

PATENT & TRADEMARK OFFICE



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- Attachment F -
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The Internet Defined

The Internet is a vast, sprawling network that reaches into computer sites worldwide. By its very nature, this interlinked web of networks defies attempts at quantification. Some sources cite Internet penetration into over one hundred countries, with twenty thousand separate networks feeding into it containing more than 2.5 million host computers and twenty million users.¹ Other sources give higher user figures, citing fifteen million people in the United States and twenty-five million worldwide who have used the Internet.² Indeed, estimates about the Internet's growth are proliferating almost as fast as new host computers on the network.

Consider that by 1985, approximately one hundred networks formed the Internet. By 1989, that number had risen to five hundred. The Network Information Center of the Defense Data Network found 2,218 networks connected as of January 1990. By June 1991, the National Science Foundation Network Information Center pegged it at close to four thousand, and, as we've seen, connections have more than quadrupled since then. If we extrapolate based on current numbers, the Internet could reach forty million people by 1995, one hundred million by 1998. Its current growth rate is 100 percent yearly.

Couple that information with an estimated 120-150 million personal computers in use worldwide and you've created a situation with dramatic possibilities. Few of the desktop computers in the average home, for example, are networked together. But many home and business computer users would like to access the Internet's rich resources. The solution: a modem and a dial-up account.

Until recently, it was difficult to access the Internet on a dial-up basis, but the increase in Internet service providers has improved that situation. In the past year and a half, estimates John Eldredge of Performance Systems International, a major service provider in Reston, VA, the number of individuals connecting to the Internet by dial-up has increased from 50 to 80 percent.³ And

B-6-48

commercial providers such as CompuServe, GENie, and Prodigy have all made Internet mail access available. DELPHI and BIX have full Internet connections with access to all major services. Demand is intense. "We've seen an incredible response to our offering of full Internet services," says DELPHI general manager Rusty Williams. "It's been well received by current members and by other people looking for Internet service options—people in business, students, researchers, families."⁴ UNIX-based service providers tell much the same story of growth in the individual user market.

A BRIEF HISTORY OF THE INTERNET

The Internet's beginnings gave no hint that it would evolve into a publicly accessible network. Like many other great ideas, the "network of networks" grew out of a project that began with far different intent: a network called ARPANET, designed and developed in 1969 by Bolt, Beranek, and Newman under contract to the Advanced Research Projects Agency of the U.S. Department of Defense (ARPA).

The ARPANET was a network connecting university, military, and defense contractors; it was established to aid researchers in the process of sharing information, and not coincidentally to study how communications could be maintained in the event of nuclear attack. From humble beginnings—the ARPANET's founders originally contemplated letting only researchers log on and run programs on remote computers—the network grew. They soon added file transfer capabilities, electronic mail, and mailing lists to keep people interested in common subjects in communication.

But even as the ARPANET grew, other networks were under development, and it became clear that new methods of communicating would be necessary. As early as 1973, in an era of mainframe computing a decade before the desktop PC revolution took hold, ARPA, under its new acronym DARPA (Defense Advanced Project Agency)⁵ began a program called the Internetting Project. The goal was to determine how to link networks. Central to this concept of "internetting" is the need to overcome the different methods each network uses to move its information. When properly implemented, so-called *gateways* can be used to connect networks, passing traffic seamlessly from one to the other.

Finding the Right Protocol

Making internetwork links work requires the right protocol. In computer parlance, a *protocol* is simply a set of conventions that determines how data will be exchanged between different programs. Protocols specify how a network is to move messages and handle errors; using them allows the creation of standards separate from a particular hardware system. DECnet, for example, is a protocol used by networks running Digital Equipment Corporation computers; Novell, a familiar name in office networking, is another example of a protocol standard that allows computers to work together. Everything from the speed of the communicated data to the addressing schemes used to move individual message traffic is factored in the protocols used by a given network.

The Internet uses a protocol called *TCP/IP*, which stands for *Transmission Control Protocol/Internet Protocol*. IP is responsible for network addressing, while TCP ensures that messages are delivered to the correct location. These

B-6-49

powerful protocols were developed in 1974 by Robert Kahn, a major figure in ARPANET development, and now president of the Corporation for National Research Initiatives (CNRI), and computer scientist Vinton G. Cerf, now president of the Internet Society and vice-president of CNRI. Their pioneering work created the mechanisms by which the Internet could appear. In fact, if we are looking for a quick definition of the Internet, we can simply say that it is a network of networks that run the TCP/IP protocol suite.

If you will fall into the habit of thinking of the Internet as a metanetwork—a network made up of interconnecting networks—you will grasp the dispersed, decentralized nature of this enterprise. Around the world, connecting through special computers called *routers* and *hubs*, computers from different manufacturers running a whole range of operating systems can communicate with each other. Digital Equipment Corporation minicomputers can talk to Sun Microsystems workstations. Standalone PCs and Macintoshes can talk to Intel machines on office networks; they, in turn, can reach large-scale regional networks, which connect their high-speed circuits over a grid called a *backbone*.

You should realize that TCP/IP is not the only protocol for connecting a variety of different networks. The Internet is actually becoming a multiprotocol network, integrating other standards into its operations. Chief among these is *Open Systems Interconnection*, or *OSI*. Developed by the International Organization for Standardization (ISO), OSI has been widely embraced in Europe, where the momentum of TCP/IP has been less overwhelming than in the United States. Systems using other protocols likewise connect through gateways to the Internet; BITNET, for example, is a network that communicates using its own standards, but which is at least partially accessible to the Internet through such linkages. And the UNIX-to-UNIX Copy Program (UUCP) network connects thousands of computers by dial-up telephone lines; its electronic mail destinations are likewise available to the Internet user.

THE INTERNET VS. COMMERCIAL ONLINE SERVICES

Commercial on-line services like GENIE and DELPHI take an entirely different approach to distributing information. If you have been a user of one or more of these systems and now want to dial into the Internet, you must master the differences between the two models. CompuServe, for example, manages its huge user base through a centralized set of computers. When you call into local telephone numbers around the world to gain access to the system, you are connecting ultimately to a centralized set of resources. More telling is the fact that the commercial operation is managed from the top as a business. There is a company behind CompuServe, just as there is behind BIX and DELPHI.

Not so with the Internet, which has grown up free of both the advantages and problems caused by management from the top. This is why, when you connect to the Internet, you must choose from among a wide range of service options (we examine these in the next chapter). No central sign-up facility exists for the Internet; rather, you make contact with a service provider who allows you to gain access to the network through local computers. The consequences of this decentralization on network resources are likewise strong. What you find on the Internet depends on the decisions of thousands of system administrators around the world. No single company has made an

B-6-50

overall decision about network design, which makes mastering the search tools we will examine later a critical part of your explorations.

What Is Packet Switching?

Consider the great problem of networking diverse computer systems. You would like to move a stream of data from one computer across a communications link to others. How does the data get there, and how can we ensure that when it does so, it arrives in precisely the condition it was when it left? Can we be sure that our addressing scheme works, and that, in the event of a network failure, our data will be rerouted so that it reaches its destination? These are problems that network protocols must address. The Internet uses a scheme called *packet switching* to solve them.

Packet switching takes data and breaks it into parts, giving each segment a header with the necessary routing information. Computers on the network examine these headers and move the data packet along to the next site. Each time, the packet gets closer to its destination. A major bonus of packet switching is that the computers routing this data can select alternate routes when a given link fails (remember, this system was developed by researchers who were considering how to ensure reliable communications when parts of the network were destroyed in a nuclear conflagration). Another bonus: The computers at either end of a packet network connection can operate at different speeds; the network itself acts as a buffer to adjust for the difference.

You may also have run across the term *circuit switching*. Think of one-to-one contact here. If you set up a data session between two computers using ordinary telephone lines, placing a call whenever you need to move data, you would be using circuit switching. The method is useful when you need to connect computers to transfer large amounts of information. But because it requires you to set up a circuit dedicated to an exclusive use each time you use it, circuit switching is unable to handle the massive amounts of diverse data carried by the Internet. Complex applications requiring contact with multiple computers must rely on the packet switching model.

The Internet Emerges

In 1993, the U.S. Defense Communications Agency mandated TCP/IP for all ARPANET hosts. In doing so, it established a standard by which the Internet could grow. From this point forward, it would be possible to add more gateways, connecting more networks, while the original core networks remained intact. Most people date the true arrival of the Internet at 1983, the year when the original ARPANET was split into MILNET—to be used for military communications—and the ARPANET—for continuing research into networking. But, as early as 1980,⁶ CSNET, a network linking computer science departments in several states, became the first autonomous network DARPA allowed to connect to the ARPANET.

CSNET eventually merged with BITNET in 1989. The ARPANET itself was decommissioned in June 1990, its functions absorbed into the broader structure of the Internet. But the two networks had established a workable principle: let networks communicate by a set of protocols, with new networks being added to an ever-growing metanetwork communicating through gateways. That principle

B-6-51

depths of the world's fastest supercomputers to 1200 bps dial-up modems moving electronic mail traffic into some of the world's poorest countries. Clearly, a directory of all its constituent networks would be a massive volume which would quickly pass out of date. Users interested in tracking down network structure will, however, be interested in Tracy L. LaQuey's *The User's Directory of Computer Networks* (Digital Press, 1990) as well as John S. Quarterman's *The Matrix* (Digital Press, 1990); both are excellent starting points. And anyone seriously attempting to monitor network growth will learn that an active on-line presence is critical.

The Big Three Internet Applications

As Douglas Comer points out in his *Internetworking with TCP/IP. Vol 1: Principles, Protocols, and Architecture*, what you as an end user see of the TCP/IP protocols is a set of application programs that enable you to use the network to good advantage.¹² You and I don't need to know the intricacies of how TCP/IP functions, though if you're curious, there's no better or more respected guide than Comer's work. But running the programs themselves is not difficult, as we'll see.

Users of dial-up computer services, like users of bulletin board systems (BBS) and commercial on-line services, have come to expect certain capabilities from their providers, which the Internet provides in its own way through TCP/IP.

Here is how the Internet delivers these basic functions.

ELECTRONIC MAIL

Electronic mail is the most elementary service, and for many users, the most useful. Many people on the Internet have used nothing but electronic mail and still find the network indispensable. You can send messages to one or more people, deliver text files, retrieve information by automated computer programs like LISTSERV (through a gateway to BITNET), and more. While access to all three of the major Internet services is vastly preferable, it's possible to do quite a lot with electronic mail alone. A good thing, too, for aside from DELPHI and BIX, the only major on-line services with a full-fledged Internet connection, there is only limited access to the Internet from the other commercial services. That means, as we'll see in Chapter 3, you have three choices:

1. Learn to use the Internet through mail alone (Chapter 8 shows you how much you can do with such a connection).
2. Use DELPHI or BIX's full-service connection.
3. Get an account with one of the full-service dial-up providers discussed in Chapter 3 (more on these options there).

Ironically, in the early days of the ARPANET, electronic mail was considered an insignificant add-in to network capabilities. No one anticipated the high volume of traffic that began to flow as scientists exchanged ideas with geographically distant colleagues. Today electronic mail is taken for granted, from small companies with office networks to giant corporations linking remote offices worldwide. Its growth has been just as strong on the commercial networks, many of whose members maintain accounts solely for the e-mail connectivity they provide.

B-6-52

FILE TRANSFER

Moving files between computers is one of the handiest features of the networking revolution. If you can find something you can use—and if it's made publicly available, as are thousands of computer files on the Internet—you can transfer it to your computer. The process is called *file transfer protocol*, or FTP. You access documents made available to the public through a procedure called *anonymous FTP*. This procedure allows you to log on to remote computers and use the resources in directories the administrators have made available to the public. Anonymous FTP will be a major tool as we retrieve files and build an Internet library later in this book.

With FTP procedures, the Internet gets challenging indeed. Instead of consulting a single library source, as on CompuServe or GEnie, for a catalog of files, you are faced with thousands of computer sites offering programs and text files. To track down the program you need easily, you should learn about the access tools we'll discuss later. With them, you can locate programs, then use FTP to move them from the source computer to your service provider's computer at high speed, and subsequently download them to your own machine.

REMOTE LOGIN

Remote login, otherwise known as Telnet, provides the ability to connect to a remote computer and work with it on an interactive basis. Again, the Internet opens the doors to a worldwide computing environment, on many of whose connected machines are services, databases, and other resources that can be examined and manipulated. By using Telnet, you can log onto the library catalogs of distant universities, look for information about everything from the formation of distant galaxies to recipes for potato soup, and examine Supreme Court decisions or the lyrics of popular songs. All the while, your computer will act as a terminal of the remote computer, which will respond to your command. In many cases, menu-driven systems at the other end make interactive sessions intuitive, but some systems are considerably easier to work with than others.

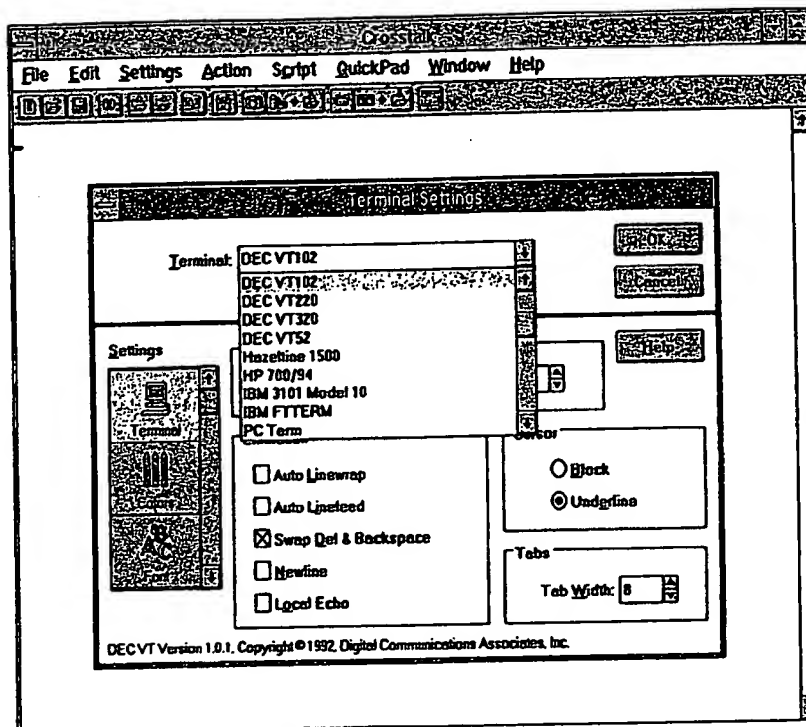
Note that when the network called "the Internet" is referred to in print, it always has a capital I. But you may also see abundant references, if you prowl your bookseller's shelves for computer books or read the computer press, to general terms such as "internets," "internetting," and "internetworking." Remember that TCP/IP can pass information among computers that aren't on *the* Internet. Your company, for example, might have local area networks in a number of sites. At some point, it would make sense for management to link those LANs together. One way of linking them is through TCP/IP. Your company would have established an *internet*, but you're not on *the Internet* unless you decide to be.

Public Packet Switching Networks

We have already discussed packet switching, and how it breaks messages into segments, each of which contains the necessary addressing information to ensure safe delivery. The ARPANET was the first major packet-switched network, running on an experimental basis for the use of DARPA contractors and not open to the general public. But as a dial-up modem user, you have probably encountered another form of packet switching, as used by networks like BT Tymnet or SprintNet. These public networks allow you to contact distant computers with a local telephone call; they then route your computer traffic to the appropriate destination.

B-6-53

Figure 3.1
Crosstalk for
Windows, terminal
emulation choices
from the Settings menu.



SIGNING ON—A PERSONAL ODYSSEY

Commercial access to the Internet has improved so dramatically in the past two years that newcomers will be startled to learn that there was a time when the process was excruciating, although many early treatments of the subject made it sound like a snap. "Need access? Just ask your system administrator," they blithely said, assuming you wouldn't ask if you weren't already working on a network in the first place. And indeed, if you were already on a network, the advice was sound. Many people to this day don't realize they can connect through their work site and that, in such cases, a simple request is usually enough to get them up and running.

But it was a different story for anyone who was trying to log on by modem from a standalone computer. For me, logging on to the Internet became something of a crusade, deepening into obsession as I continued to run into a stone wall. Several years ago, I made the mistake of asking this question: "I work out of a home office. I don't have Internet access and I don't have a system administrator. What do I do?" I asked people in my area and looked for answers on various on-line services. I peppered local bulletin boards for advice and called computer gurus in Research Triangle Park, pestering some poor souls for months.

The result? "Try the universities," some said. I called Duke, UNC, North Carolina State; access there was restricted and no one I spoke with knew how to get it. Maybe if I was a student. Unfortunately, my years at UNC had ended in the mid-1970s. "Call some of the big corporations," I was told. "Someone out there might be able to get you an account." I didn't know what I was doing, but

B-6-54

I began to make these calls. Most people didn't know what I was talking about. Those who did seemed incredulous that I would ask. "Network connections are private," they said.

Network connections private? If that doesn't give you something to think about, what does?

The Internet is not CompuServe or Prodigy. Lacking any central organization, the network has no billing address. You can't make a phone call to a network office and say, "Sign me up." You'll also get confused by the plethora of possibilities some of the people who are already on the network will tell you about. "Do you want a full connection?" they'll ask, and you reply, "Sure," not understanding why you would want anything else. "The best we can do is SLIP," you may hear. SLIP? What does it mean? And why do these people I'm talking to have nothing better to offer? Is SLIP some kind of restricted access?

It wouldn't be until CONCERT-CONNECT came along that I made my real plunge into the Internet. CONCERT-CONNECT was a service provider which, among other options, made possible local dial-up access to the Internet. It brought order into the North Carolina Internet scene by offering a flat rate per month, allowing you to log on to the computers at MCNC (formerly the Microelectronics Center of North Carolina, now known solely by its acronym, as are many computer organizations). The flat rate was attractive, as were the services; not just USENET newsgroups, but FTP and Telnet as well; not just electronic mail, but the whole panoply of features that make the Internet so fascinating.

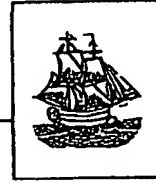
Today, CONCERT-CONNECT is gone. In its place are a growing number of Internet service providers, each offering dial-up access. Many also offer more advanced forms of network connection, including the aforementioned SLIP (which we'll discuss in this chapter), and other forms of direct links all the way up to high-speed dedicated T1 and T3 lines. My new service provider is Interpath, a division of Capitol Broadcasting Corp., here in Raleigh. Interpath is representative of the new breed of service provider, offering network connections to a great variety of customers from individual home users to the largest businesses.

What a change. In every state, service providers are springing up; indeed, Internet access is becoming a growth industry, bidding fair to create a price war that will be followed by an inevitable period of consolidation. For you, the individual or small business user, the good news is that prices are dropping across the board. CONCERT-CONNECT once charged \$175 per month for SLIP access; Interpath is now offering comparable service for \$37.50, and regular dial-up access is cheaper still. If it's a full-service access provider you're looking for, finding one will keep getting easier. No provider in your area? There will be soon.

Even more options are appearing from the ranks of the commercial on-line services like CompuServe and DELPHI. In fact, all of the major on-line services now offer some form of Internet connectivity, even if only a gateway that allows you to send and receive mail to and from the Internet. DELPHI and BIX have moved aggressively to open full-access provisions. America Online is beginning to widen its existing mail-only gateway with a host of new services including USENET newsgroups and access to the superb Internet interface and display tool called Gopher. Watch for announcements from the other commercial services; Internet access is now the hottest ticket in town as the networks grow together into a true global matrix.

We will work our way up the access ladder to show you what options are available. If you are already on the Internet, you won't need to read the following

B-6-55



Electronic Mail as a Gateway to the Internet

File Transfer Protocol and electronic mail are both key components of Internet connectivity, but what do you do if you only have an Internet mail connection? After all, with the exception of DELPHI, BIX, and America Online, the major commercial on-line services offer only mail connectivity. Fortunately, your on-line mailbox with a commercial provider like CompuServe or GEnie can become a true gateway into the Internet. You won't be able to accomplish everything—in particular, Telnet simply can't be managed by mail alone—but if you are looking for files, you'll be pleased to know you can use electronic mail to retrieve them, without needing to employ FTP procedures yourself.

This chapter is devoted to people with accounts on the CompuServes and GENies of this world. Let's be clear on this: The optimum connection for a dial-up user is a full-access account with an Internet service provider, because it gives you the ability to use all three key Internet protocols—e-mail, FTP, and Telnet. But maybe you're hoping to shop around on the Internet first, to see what's available. Or perhaps you use CompuServe daily and would like to streamline your operations, running everything through your account there. Whatever the case, if you need to transfer files by mail, you can do it. The solution is workable, and while it's not exactly elegant, it does what you want it to do.

B-6 56



What You Need: A Background Document on Internet Faring

The Document: FAQ: How Can I Send a Fax from the Internet?

How to Get It: The document is posted regularly on the USENET news groups alt.internet.services, alt.online.service, alt.bbs.internet, alt.answers, and news.answers. You can also receive new editions automatically by sending mail to this address: savetz@rahulnet asking to be added to the distribution list.

FINGER BY MAIL

finger is a program we discuss in Chapter 14 which allows you to retrieve information about users and, in some cases, about a wide variety of information such as earthquake updates or popular music. Normally, **finger** is run as a program on your UNIX service provider's computer. However, you can also use electronic mail to send and retrieve the results of **finger** queries. To do so, send e-mail to:

b.11d@icott@ic.ac.uk

In the **Subject:** field, put this command: **#finger user@site** where **user@site** is the address you want to reach. You will find a list of potential **finger** sites in Chapter 15's directory.

Suppose, for example, that you want to retrieve NASA headline news. The address is nasanews@space.mit.edu. Your e-mail request would then read:

#finger nasanews@space.mit.edu

placed in the **Subject:** field of the message. Sending this, you will shortly receive an update on NASA press releases.

SENDING ELECTRONIC MAIL TO OTHER NETWORKS

If you have any doubts that Internet electronic mail opens out to networks across the world, consider the evidence of John J. Chew's *The Inter-Network Mail Guide*, available on the Internet both as a posting in various USENET newsgroups and also by download with anonymous FTP. Chew tracks the ways in which the various commercial providers maintain links to and from the Internet, and his list is growing with each new posting. A glance through it reveals linkages to such varied providers as Geonet Mailbox Systems, BIX, GreenNet, KeyLink, PeaceNet, SprintMail, and AppleLink, to name literally but a few. Chew's list will come in handy, and I advise you to get a copy.

Now you will learn how to send mail from the Internet to addresses at the major on-line services.

B-6-57



What You Need: A List of Network Interconnections

The Document: Inter Network Mail Guide by John Chew

How to Get It: Through anonymous FTP to `ftp.msstate.edu`. The directory is `pub/docs`. The file name is `internetwork-mail-guide`. You can also keep up with changes to this document by monitoring the USENET news groups `comp.mail.misc` and `news.newusers.questions`.

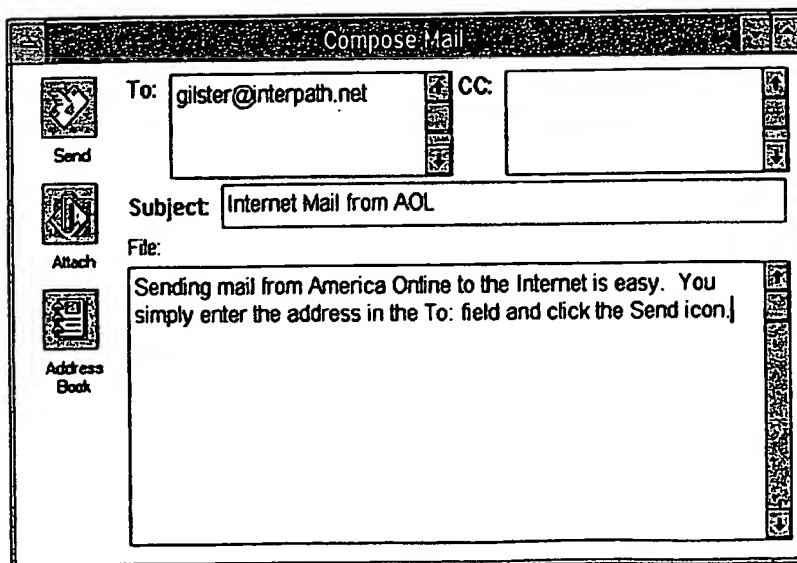
America Online

To send mail from the Internet to America Online, the syntax is `username@aol.com`. The user name should be all lowercase, with spaces removed.

Outgoing messages cannot be any longer than 32k. On the PC version of America Online, incoming mail cannot be any longer than 8k, which effectively prevents your using this service for ftpmail file transfers. On the Mac version of America Online, as well as the Apple II version and PC-Link, incoming mail cannot be any longer than 27k. All characters except newline and printable ASCII characters are mapped to spaces. Users are limited to seventy-five pieces of Internet mail in their mailbox at a time.

To send mail from America Online to the Internet, simply enter the Internet address and write your message. Figure 8.19 shows the process in action.

Figure 8.19
Sending a message to
the Internet from
America Online.



B-6-57

BIX

To send mail from the Internet to BIX, the syntax is `username@bix.com`. To send mail from BIX to the Internet, enter the Internet address preceded by `to` at the Mail: prompt. The following is an example of a message being sent from BIX to the Internet:

```
Mail:to gilster@interpath.net
Enter subject: Mailing from BIX
Enter text. End with '. <CL>
```

This message is to test BIX's connections to Internet e-mail.

```
send/action:send
Sending..Memo 76679 sent
```

There are no size restrictions on BIX messages to and from the Internet, and no monthly or per-message fee for Internet mail. You can move up to 10MB per calendar month (in both directions, to and from the Internet), without any additional charges. Beyond that, the charge is \$1.00 per 100k transferred. Messages can be up to 0.5MB in length in either direction; longer messages may be truncated.

CompuServe

To send mail from the Internet to CompuServe, the syntax is `usernumber@compuserve.com`. CompuServe user numbers contain commas, which must be changed to periods when you send from the Internet. Thus 12345,6789 becomes 12345.6789. To send me a CompuServe message, for example, you'd send to `73537.656@compuserve.com`.

To send mail from CompuServe to the Internet, as just shown, lead off the address with `>INTERNET:`. Sending a message to `ftpmail`, then, requires the address:

```
>INTERNET:ftpmail@decwrl.dec.com
```

DELPHI

To send mail from the Internet to DELPHI, the syntax is: `username@delphi.com`. To send mail from DELPHI to the Internet, use the word `internet` followed by the recipient's name (with no spaces in between) enclosed in quotes. On DELPHI, to send a message to `ftpmail`, for example, you would address it to `internet"ftpmail@decwrl.dec.com"`. The following is a sample message from Delphi to the Internet:

```
MAIL send
To:      internet"gilster@interpath.net"
Subj:    Test Message
Enter your message below. Press CTRL/Z when complete, or CTRL/C to quit:
Checking the DELPHI connection to the Internet.
^Z
```

B-6-58

GEnie

To send mail from the Internet to GEnie, the syntax is `username@genie.geis.com`. To send mail from GEnie to the Internet: After entering the Internet address, you are prompted for additional GEnie addresses, copies, and a subject line. You can then enter your text. Figure 8.20 shows a GEnie message to an address on the Internet as it is being composed. GEnie's Internet mail services cost \$3.00 per hour.

MCI Mail

To send mail from the Internet to MCI Mail, the syntax is: `username@mci-mail.com`. MCI user names should have spaces removed. Thus Sam Spade becomes `Sam_Spade@mcimail.com`. Conversely, it's possible to use an MCI user number. If Sam's number is 123-4567, simply remove the dash. Thus `1234567@mcimail.com`. If there happens to be more than one Sam Spade in the MCI directory, you can reach the desired party by sending to:²

`Sam_Spade/1234567@mcimail.com`

To send mail from MCI Mail to the Internet, use the EMS option. Here's how to do it:

- At the TO prompt, type recipient's name and the word EMS in parentheses.
- At the EMS prompt, type INTERNET.
- At the MBX prompt, type the recipient's Internet address. Note: If the Internet address exceeds eighty characters in length, you must split the

Figure 8.20
Sending a message to
the Internet from
GEnie.

```

Enter Destination GEnie Address or C/R to continue.
?

Would you like to receive a copy of the message? (y/n) ?n

Enter the subject of your Internet message (max 30 characters) or C/R for no sub
ject:
<.....>
?Mailing from GEnie

When you see the prompt, 1>, enter your message.
When you have finished entering your text, use the *S.
to send the Internet message. Use *X to exit without sending.

Enter Internet text:

Queue#  Item  From      Length  Sent  Subject
1 6239343  GENIE.MGMT  268  93/05/27  Nov Pricing Effective July 1st

1>GEnie prompts the user through the mail process, so sending mail to
2>the Internet is relatively simple. You will be prompted for additional
3>addresses for your message, asked if you'd like a copy of it, and given
4>space to enter a subject line.
    
```

B-6-59

address into multiple MBX lines. The split should occur at one of the following characters: @ ! %.

- Only one Internet mailbox may be used with an individual TO or CC recipient.
- Complete the mailing procedure as usual.

Figure 8.21 shows an example of sending a message to an Internet address from MCI Mail.

Prodigy

Prodigy is the huge commercial service created by IBM and Sears. To send mail from Prodigy to the Internet, you will need a program called Mail Manager. Jump to *About Mail Manager* while on-line to learn how to download it.

To send mail from the Internet to Prodigy, use the Prodigy user ID followed by the domain name. Thus, to send mail to klbc98x, you should address the message to klbc98x@prodigy.com.

MAILING LISTS AND ELECTRONIC JOURNALS

A huge variety of mailing lists is available to people with electronic mail access to the Internet. So much is available here that it would make little sense

Figure 8.21
Sending a message to
the Internet from MCI
Mail.

```

EMS:      INTERNET
      EMS   376-5414 INTERNET                NRI                Reston

```

Enter recipient's mailbox information.

```

MBX:      mike_banks@bix.com

```

If additional mailbox lines are not needed press RETURN.

```

MBX:

TO:       Mike Banks
          EMS: INTERNET / MCI ID: 376-5414
          MBX: mike_banks@bix.com

```

Is this address correct (Yes or No)? y

CC:

Subject: MCI Mail Check

Text: (Enter text or transmit file. Type / on a line by itself to end.)

Mike:

Please let me know if this message gets through OK. It's routed to your BIX account via MCI Mail.

Thanks!

Paul

B-6-60

(9)

B-6-61

internet

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• VIRTUAL ENCOUNTERS

• DIGITAL RIGHTS

• SUPERNATURAL SITES

CHATTER



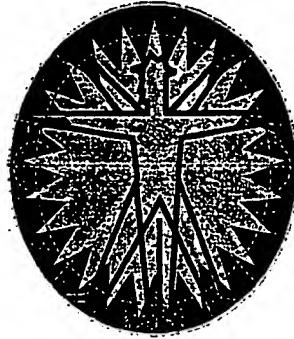
Display Until December 15, 1994

Attachment 6

B-6-62

Departments

LETTERS TO THE EDITOR	4
FROM THE EDITOR	
by Michael Neubarth	6
INTERNET NEWS	10
INTERNET BOOKSHELF	
Edited by David Dean	104
POINTERS	106
INTERNET FORUM	108
INDEX TO ADVERTISERS	112



76

contents

99



50



86

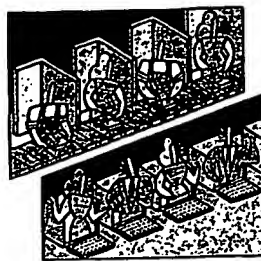
Columns

THE SURFBOARD	
by Andrew Kantor and Eric Berfin	14
NET PROFITS: Power Rap	
by Christopher Locke	18
INFO HOUND: Herbs, Ella, and IRC	
by Dave Taylor	22
ENTRY LEVEL:	
Learning the Ropes: A Usenet Style Guide	
by Andrew Kantor	24
DIVING INTO THE INTERNET:	
Internet: Going South	
by Joel Snyder	94
FOUND IT ON THE NET: Work or Play?	
by Linda J. Engelman	96
THE INTERNET CURMUDGEON:	
Painting the Right Picture	
by Daniel P. Dem	99
ARTIST AT LARGE:	
Going Graphical (There's No Place Like Home Page)	
by Kenny Greenberg	102

B-6-63



64



18

Features

USENET: Past, Present, and Future by Dave Taylor	26
SECRETS FROM WITHIN USENET by Kevin Savetz	31
NEWSREADERS: An "n" User's Guide by Robert Sanchez	34
NEWSGROUP CULTURE by Robert Sanchez	38
DOUSING FLAMES by Kristina Harris	42
VIRTUAL ENCOUNTERS by Thomas Barrett & Carol Wallace	45
THE EX FACTOR by Brad Stone	50
GABFEST—INTERNET RELAY CHAT by Aaron Weiss	58
ALL THE NETNEWS THAT FITS Interview with Brad Templeton of ClariNet by Jeff Ubois	64
SERVING ADS by Joseph Raben	70
ANATOMY OF LISTSERV by Karl Signell	76
DIGITAL RIGHTS by Jean Erhard	78
ALIENS AMONG US by Andrew Kantor	82
WHY TEACHERS FEAR THE INTERNET by Crawford Kilian	86
SUPERNATURAL, STRANGE, AND SINISTER by David R. Noack	88

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B-6-64

Aliens Among Us

A horde of new users from America Online, CompuServe, GENie, and Prodigy is coming onto the Internet.

By Andrew Kantor

If you listen carefully, you can hear the grinding of gears and the creak of metal. The big guns of the on-line world—America Online, CompuServe, GENie, and Prodigy—are slowly turning and taking aim at the Internet, and cyberspace will never be the same.

For users of these services, the next few years will see the opening of a doorway (gateway, rather) to a vast and almost uncharted resource. For veterans of the Net, it means an influx of new users (often referred to in a less-than-friendly tone as "clueless newbies") that puts the college September Rush to shame.

There has already been a test case: a virtual sacrifice to the gods of the Net, if you will. America Online (AOL) expanded its Internet services in March 1994, making Usenet Newsgroups accessible to its users. But those users quickly learned the hard way that the Internet did not have an enforced Terms of Service to keep users friendly. They were faced with a barrage of verbal attacks. Their crime? Simply not knowing where to post their messages. But on the Internet, ignorance is never an excuse, and there is no friendly sysop only an instant message away.

Of course, from the Internet users' point of view, thousands of postings from aol.com were suddenly invading the Usenet, often in inappropriate newsgroups. ("Someone searching for family in Oregon should know enough not to post in alt.best.of.internet," says one Usenet veteran.)

America Online learned some valuable lessons that the other services should take to heart before taking the

leap beyond their cloistered walls. The most important? That explaining to users what they're getting into may save them a lot of time and trouble . . . and a good deal of embarrassment.

But AOL is not the only service with Net-related troubles. Prodigy opened a local Internet bulletin board so its users could discuss the global computer network. But somewhere along the line a signal got crossed, and users thought the bulletin board was the Internet. Messages to the tune of "Hi, I'm in Nebraska. Is anyone out there?" propagated the board, as more savvy participants tried to explain—with limited success—what was going on. So Internet citizens, fresh from dealing with 650,000 spanking new AOL users, dread the impending flood from Prodigy's and CompuServe's four and a half million total subscribers.

America Online: Act II

Despite some problems with quirky Usenet software (it posted some users' messages up to a dozen times) and untrained users, America Online has weathered the storm, and now is ready for the next step. AOL now offers a Gopher client and limited access to some WAIS databases. FTP and telnet services also are planned, although no date has been set, according to managing editor Kathy Ryan. "We've been driven by what our customers ask for," she said.

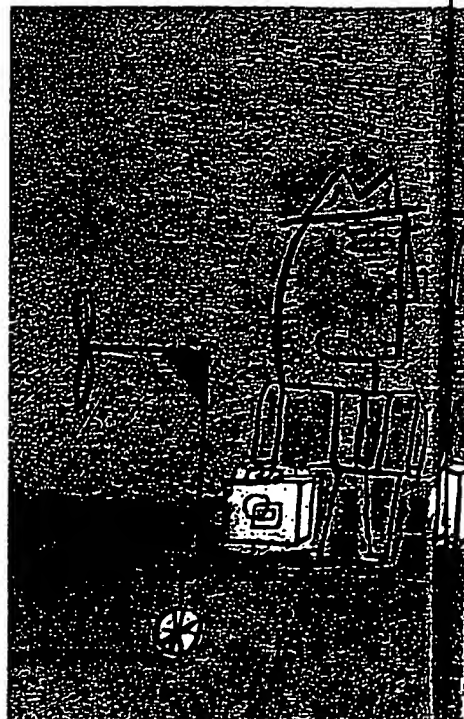
However, AOL's Gopher and WAIS services won't look familiar to veterans of the Internet, and not just because of the graphical look. The two applications have been combined under a single interface: a Gopher-like series of menus that present either text files or other menus. In addition, AOL is limiting the Gopher

information it will make available, and users will only be able to easily access Gopher services that AOL's editors have chosen. Veronica searches also are limited: You cannot choose the server to search. And WAIS searches will not return the relevancy information the system is known for. Thus, AOL's combined Gopher/WAIS offering is a watered-down version of both applications that seems to promise more than it delivers—a charge AOL has faced before.

AOL has been courting partners to increase the services it provides. An alliance with publisher Simon and Schuster, for instance, will allow AOL to offer College Online to provide e-mail and other resources for students and educators as an alternative to the Internet.

Another service being tested is a TCP/IP connection that will enable users to access AOL through an office LAN or via a SLIP or PPP Internet connection. The beta software is only available for

Illustration by James Yang



B-6-65

Macintosh users, and is located at AOL's anonymous FTP site, ftp.aol.com, in the /mac directory. The file is called TCP-for-Mac-AOL-2.1.sea; a README file provides instructions. (AOL's standard Macintosh and Windows software is also available at that site.)

On the Usenet front, complaints about AOL users continue to mount. According to Ryan, "(the reaction) wasn't surprising. When we came onto the Internet, I believe we came on as the single largest site, and we did have some members who didn't understand netiquette." But that's changed now, she says. "I think AOL has done more to educate its users than anyone else." For instance, the service now has unofficial "Net buddies"—Internet-savvy users who monitor Usenet and inform newcomers when they violate netiquette.

America Online's users are not entirely to blame, according to some. AOL software makes it difficult to reply by e-mail (users must post personal follow-ups instead) and users cannot include original message text in their replies. AOL users also must pay \$3.50 per hour to use News because there is no off-line newsreader. That means, as one user puts it, that they must pay to think; the more they think about what they write, the more it costs.

In late August, thanks to an aggressive campaign of giving out free trial

accounts, AOL claimed to have reached the one million subscriber mark, making it slightly less than half the size of CompuServe or Prodigy.

CompuServe: Slow and Steady May Win the Race

While AOL was opening its doors to let its users out, CompuServe's first step was to let its users in, by allowing users to telnet to their CompuServe accounts from the Internet. CompuServe can do this for one simple reason: Its service is text-based (although graphical front ends are available) and thus well-suited for use through one of the Internet's typical terminals.

Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time, but it charges for e-mail usage beyond a certain volume: After about 60 free three-page messages each month, users must pay approximately 5¢ for each 1,500 characters they send or receive.

CompuServe recently gave its users access to Usenet News, and provided plenty of warning signs along the way ("This information originates *outside* of CompuServe, and CompuServe therefore claims no responsibility for the content"). However, CompuServe's Usenet software suffers from some of the same problems as America Online's. Most obvious is the inability to automatically insert text from an original message into a follow-up message.

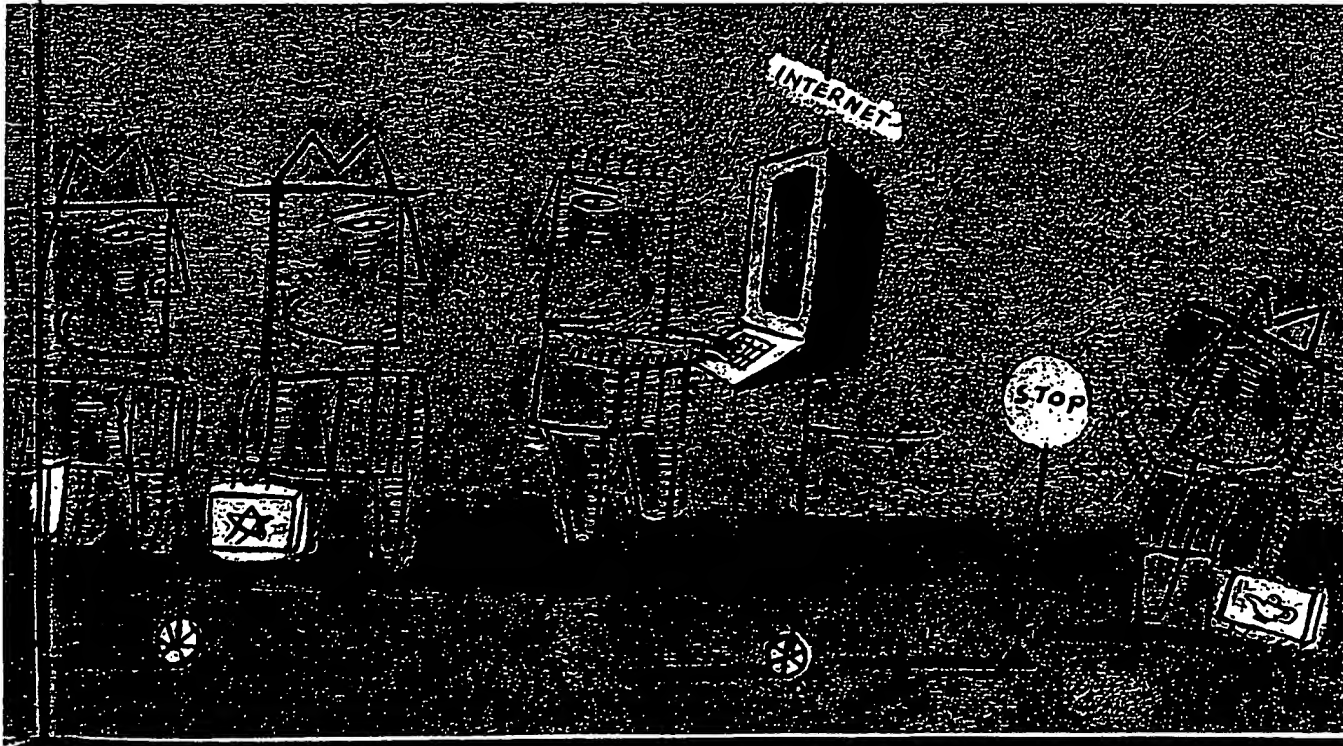
CompuServe's Usenet software betters AOL's in one way: When you choose to reply to a message, the default settings send the reply through e-mail only, and not into the newsgroup—a feature many Usenet residents will appreciate.

While seeking to protect the Internet from breaches of netiquette by its members, CompuServe also is trying to shield its members from any perceived offensive aspects of the Internet. Scroll through the lists of available newsgroups on CompuServe, for example, and alt.sex is nowhere to be found. However, you can subscribe to the newsgroup by typing in the name yourself.

Choosing a group from one of CompuServe's lists is no piece of cake. You must slowly scroll through hundreds of listings in alphabetical order. For example, to find alt.tv.something, you must make your way through everything from alt.1d to alt.travel.roadtrip.

And if you happen to subscribe to one of the ".binaries" newsgroups, where people post encoded pictures, sounds, or movies, the newsreader software offers no means to decode them. America Online left out this function as well, much to the chagrin of the people who frequented those groups.

According to Dave Bezaire, CompuServe's senior product manager, the service is planning several other new Inter-



B-6-66

"Our intention is to be very clear with our members about what the Internet is—to make them aware that they're leaving this world."

net-related features, but does not want to release too many new offerings at one time. "The tremendous press coverage of the Internet has raised expectations sky high," Bezaire says, "so we want to avoid overhyping it in our community before it's available."

Bezaire would not comment on what else might lie ahead for CompuServe. "Our philosophy is to bring Internet services forward on an incremental basis—manage the process, manage the service, and educate the community," he said. "As we release additional Internet products and services, I want it to be a satisfying experience for all our members."

GEnie: Holding Its Ground

GEnie has been offering an e-mail gateway to and from the Internet for several years, but nothing more. That's the way it will likely stay "for the foreseeable future," according to Vivian Kelly, media relations specialist.

As on AOL, e-mail on GEnie is free and unlimited. And GEnie users are not entirely cut off from the Net: It offers an Internet RoundTable, in which sysops will gladly search for and retrieve files if requested by users, and will even scan files for viruses. But Kelly says that GEnie has been reluctant to offer full Internet access because the service is part of General Electric Information Services (GEIS) and its corporate customers have concerns about security.

Prodigy: In Time, All Things

With more than two million individual users, Prodigy is the world's largest on-line service, and it is preparing to open its door to the Internet—albeit slowly.

Prodigy already has an e-mail gateway to the Internet, although users must acquire separate software to send and receive messages. But that's going to change,

according to product manager Bill Day, who said that basic Internet e-mail capabilities would soon be integrated into the software. "We're reorganizing Prodigy to put more focus on the Internet," Day explained. "We're very excited about it."

The next phase of Prodigy's Internet access will be some refinements to the e-mail software, and access to Usenet News. And Day said the service had given a lot of thought to how Prodigy users would react to the Internet, and vice versa. "We've been thinking about how we should educate our people on how the newsgroups operate. We need to cover How do you behave, and What do you not do?"

Prodigy will try to lessen the force of the impact—if not the scope—in several ways. First, it will cache Usenet News on its own server to reduce the impact on the Internet. Second, unlike America Online, Prodigy won't be making it easy to reach Usenet. "Our approach is that you have to be interested and knowledgeable enough to reach these services," Day said. "The people must be communications savvy. It's not point and click." Those measures, coupled with a "strong education effort," he said, should mean that Prodigy users would know how to behave when they reached Usenet.

Prodigy is also planning to offer services that don't appear on the Internet, including an alliance with CBS to offer interactive entertainment features including show previews.

In terms of the Internet, Day said that Prodigy eventually would offer some sort of Copher-like access to information on the Internet, including government resources, sound files, and other data that might interest users. But the information would be far from comprehensive, and would be a selection of some of the more popular files. "We would act as a mediator between the Internet and our members," Day said.

"Our intention is to be very clear with our members about what the Internet is, and to be honest about the world out there—to make them aware that they're

leaving this world," Day explained. "We're thinking hard about what we've learned about content and customer service by running our own little on-line service, and that will affect how we pick content and how we present it to people."

Down the Road

The major on-line services are not rushing to provide full Internet access because doing so might well lead to their demise. After all, no matter how you access the Internet—from school, a local provider, or a commercial service—the content is the same. And as better, user-friendly Internet interfaces like Mosaic and Eudora are developed, AOL, CompuServe, and Prodigy will find it harder to differentiate themselves from the Internet.

How can the on-line services compete in this evolving landscape? First, they must keep a step ahead of the Cellos and Trumpets, and must design interfaces that any junior high school student can use. They also must develop a friendly help staff to assist users in learning to cruise in cyberspace. Users only will be willing to pay more if they're getting something extra, such as 24-hour support.

The on-line services also will have to stop charging hourly fees for Internet services. Anyone who follows more than five or six newsgroups knows that on-line time can add up, so why pay \$3-\$10 per hour when you can find a local Internet provider that charges a flat rate?

Another way on-line services could compete with the Internet would be to filter it. Users could be guaranteed an environment that's friendlier, if not as open—a homogenized, pasteurized, porn-free, flame-free Internet.

Now is not the time to place bets on which of the on-line services will prosper or survive. The landscape is changing every day, and no one can venture more than a guess as to how the market will shake out over the next few years.

Andrew Kantor (ak@mecklermedia.com) is associate editor of Internet World.

B-6-67

On Haiti, Shooting From the Lip The Washington Post October 6, 1994, Thu

19 of 21 DOCUMENTS

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SECTION: STYLE; PAGE B7; CYBERSURFING

LENGTH: 939 words

HEADLINE: On Haiti, Shooting From the Lip

SERIES: Occasional

BODY: "

Pit Stops

For those visiting London who are in need of a quick daytime fix, "Cyberia" -- a "cyberspace cafe" -- has opened recently in central London offering coffee, cakes and connection to the Internet. **Connect charge:** 1.95 British pounds per half-hour. The address is 39 Whitfield St., W1 (near to Goodge Street underground station on Tottenham Court Road).

Jeremy Robinson

robinson@well.com

We also hear that at the Infomart in Dallas, off the Stemmons Freeway west of downtown, the newly opened High Tech Cafe has a computer maitre d' that asks diners in its machine voice, "Nonsmoking, smoking, or modem-ready?" Sure enough, not only is there a phone jack at the table, but a fax machine is ready nearby.

Found something intriguing, improbable, insane or especially useful on the Net? Tip Karen Mason Marrero (kmarrero@aol.com) or Joel Garreau (garreau@well.com).

GRAPHIC: ILLUSTRATION, MARC ROSENTHAL FOR TWP

LOAD-DATE: October 6, 1994

- Attachment H

B-6-68

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) No. 98-PT-596-E

B-6-69

STIPULATIONS

It is hereby stipulated and agreed by and between the parties herein that presentment to the attorneys of record of a copy of this deposition shall be considered submission to the witness for his signature within the meaning of Federal Rules of Civil Procedure; but shall in no way be considered as a waiver of the witness' signature, and is to be signed at any time before the time of trial; and if not signed by time of trial, may be used with the same force and effect as if signed.

INDEX

WITNESS:	PAGE
DANIEL J. TOUGHEY	
Examination by Mr. Polasek	4
Examination by Mr. Stitt	83
Further Examination by Mr. Polasek	98
SIGNATURE:	107
CERTIFICATE:	108

INDEX OF EXHIBITS

NO.	DESCRIPTION	PAGE
1	Notice	5
2	Answer to Interrogatory No. 1	17
3	Network Topograph Diagram	20
4	John Murphy Affidavit	25



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B-670

INDEX OF EXHIBITS (CONT'D.)

	NO.	DESCRIPTION	PAGE
1			
2			
3	5	Videotape "TouchFax America"	40
4	6	1st brochure of product	54
5	7	TF700 TouchNet terminal brochure	55
6	8	TF700 brochure	56
7	9	Not identified	-
8	10	Ad for Telephony Magazine	57
9	11	TF450 brochure	58
10	12	Interactive World article, 10/92	59
11	13	Multimedia Interactive Terminal Loc. ducmt	59
12	14	KC Business Journal article, reprint	60
13	15	1992 brochure	60
14	16	Copy of Patent # 4359631	63
15	17	Info from VPR Creative Group	66
16	18	Invoice from Spinnaker	67
17	19	Invoice to Prodigy	68
18	20	Printout of source code/transaction log	69
19	21	Documents re: TON Services, Inc.	70
20	22	Documents re: Mediatel	74
21	23	Fax to D. Vermeire, 11/92	77
22	24	Document to D. Vermeire, 9/92	79
23	25	License Agreement	80
24		(Exhibits were retained by Mr. Polasek)	
25			



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B-6-71

1 wide web sites they would like to go to. And I
2 believe now America On-Line has a world wide web
3 site and a dedicated interface through a dial-up
4 system, so they have two different paths, if you
5 will. And so I guess ours is the latter, we will
6 provide access to the internet and let somebody
7 decide where they want to go.

8 Q Okay. Let's back up. I was asking you questions
9 that relate to a user of the terminal being billed
10 for access to the internet through the use of a
11 commercial on-line service provider such as
12 Prodigy or AOL, CompuServe.

13 A Yeah.

14 Q And you said that TouchNet does not currently use
15 or have a terminal that does that.

16 A Correct.

17 Q But you did indicate they have plans to do so?

18 A Correct.

19 Q Okay.

20 A But not necessarily through America On-Line as a
21 internet service provider.

22 Q Okay. Then how is it that --

23 A You will go through a variety of different
24 internet service providers so just -- Earth Link,
25 for example, they provide -- let's say they



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B-672

1 provide internet dial tone basically, right?

2 Q Okay.

3 A And our systems then will -- as if you are the

4 user, will ask you where you want to go.

5 Q Okay.

6 A Or highlight different destination points on the

7 world wide web.

8 Q But if I am the user --

9 A Uh-huh.

10 Q -- I am going to have to put my credit card in

11 there and pay for that access, correct?

12 A That is the plan.

13 Q Okay. And what I am trying to get at is, do we

14 have the terminal and the software set up to do

15 this? Do we expect to roll out a terminal this

16 year, next year --

17 A Yes.

18 Q -- or when?

19 A Very soon.

20 Q At the present time, TouchNet has not rolled out

21 one of those terminals though?

22 A Not that charges for the service.

23 Q Okay. When you say very soon, can you be more

24 specific?

25 A Sometime in the next 30 days. But, again, it is



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B-673

1 Q That would be on that particular machine?
2 A It would be stored, yes, on that particular
3 machine.
4 Q If they went to a different machine in another
5 part of the airport or something, their card would
6 go through the same validation procedure?
7 A Correct, right, correct.
8 Q This exhibit, Exhibit 3, also references an
9 on-line interactive database. And the second
10 bullet point below that, it says, Public - Access
11 to CompuServe, Prodigy.
12 A Correct.
13 Q This goes back to our earlier discussion, but the
14 terminal that this document attempts to describe
15 does not disclose the use of the credit card to
16 pay for access to CompuServe or Prodigy, correct?
17 A This document doesn't specifically do that.
18 Q And at that time, TouchNet was not -- the terminal
19 was not set up to charge the user for access to
20 CompuServe or Prodigy; is that accurate?
21 A Well, at that time, the terminal didn't even have 1991
22 CompuServe or Prodigy on it. At that time, these
23 were -- these are ideas of what you could do
24 because, again, our main business was selling to
25 third parties our system.



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B-6-74

1 internet pop up there. Did you notice that?

2 A No, I didn't.

3 Q Let's see if we can go back. I'm not able to get
4 it stopped there. See if I can try it again.

5 MR. STITT: Let me give it a try.

6 THE WITNESS: I think I did see that.
7 You are in front of it now.

8 (Whereupon, the videotape, Exhibit 5,
9 was rewound to counter 34.)

10 Q (By Mr. Polasek) Now that we have been able to
11 stop the tape, it shows a rectangular gold block
12 labeled internet. I think it is right at -- I
13 thought it was the 36 second mark. It may be 34.

14 MR. STITT: It appears to be 34.

15 Q (By Mr. Polasek) Did that provide for access to
16 the internet? If the user was to touch that icon,
17 I guess is what you would call it, that portion of
18 the TouchNet screen, does that enable a user to
19 gain internet access or do you know?

20 A Not at that time, no. That was like MCI mail
21 above it. Those are possible uses for the system.
22 And so the reason we built this video was to sell
23 our systems. And so, again, the vision of
24 TouchFax, TouchNet was its multipurpose
25 information communication terminal that, depending



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0-675

1 other types of information databases such as USA
2 Today sport center for on-line sports information.

3 And then the last bullet is BBS, which is for
4 bulletin board service applications, any kind of
5 bulletin board, which was really, you know, a
6 predecessor in many respects, you know, to the
7 world wide web. Different types of information
8 bulletin boards that our system could access.

9 MR. STITT: I think we can go on unless
10 you have redirect.

11 FURTHER EXAMINATION

12 BY MR. POLASEK:

13 Q Yeah, I have some questions starting with what was
14 marked as Exhibit No. 3. Let me start over. With
15 regard to Exhibit 3, isn't it accurate that access
16 to Prodigy and CompuServe was not available at the
17 time that this document was prepared on the
18 TouchNet terminal?

19 A That's correct.

20 Q Okay. So at the time that this document was
21 prepared, you couldn't access Prodigy or
22 CompuServe from a TouchNet terminal?

23 A In 1991, that's correct.

24 Q And this document -- again I think we have been
25 through this -- this document itself does not



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Request for Continued Examination (RCE) Transmittal

Address to:
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P.O. Box 1450
Alexandria, VA 22313-1450



Application	09/134,831 (Reissue)
Number Filing Date	August 17, 1998
First Named Inventor	Richard P. Mettke
Art Unit	2743
Examiner Name	Stella Woo
Attorney Docket Number	N/4

1. **Submission required under 37 CFR 1.114** Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

- a. ☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ii. ☐ Other _____

- c. ☒ Enclosed
- ☒ Amendment/Reply Affidavit(s)/ Declaration(s)
- ☐ Information Disclosure Statement (IDS)
- iv. ☐ Other _____

3. Miscellaneous

- a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)
- b. ☐ Other _____

Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

- The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to
- a. ☐ Deposit Account No. _____ I have enclosed a duplicate copy of this sheet.

☐ RCE fee required under 37 CFR 1.17(e)

ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17)

iii. ☐ Other _____

- b. ☐ Check in the amount of \$ _____ enclosed
- c. ☒ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature

Name (Print/Type)

Richard P. Mettke
Richard P. Mettke

PTO-2001/10-26-06

Registration No.

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Name (Print/Type)

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Richard P. Mettke

Date 10-25-06

B-6-78

Appendix C- Related Proceedings

Appendix

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

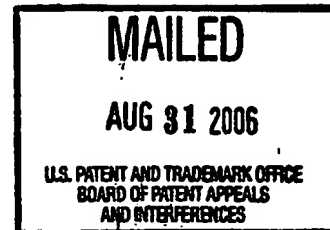
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD P. METTKE

Appeal No. 2006-0625
Reissue Application 09/134,831

ON BRIEF



Before BARRETT, LEE, and MEDLEY, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 6-9. Claims 1-5 have been canceled.

We affirm, but also enter new grounds of rejection.

REISSUE and PROTESTS

This application was filed on August 17, 1998, for reissue of U.S. Patent No. 5,602,905 (the '905 patent), entitled "On-Line Communication Terminal/Apparatus," by inventor Richard P. Mettke, issued February 11, 1997, based on Application 08/376,247, filed January 23, 1995. The reissue declaration by inventor/Patent Owner Richard Mettke states that he believes the patent to be wholly or partly inoperative or invalid by reason of claiming less than he had a right to claim, in particular, because he removed the word "Internet" from the specification and the claims without submitting additional claims directed to an online communications terminal for accessing the Internet.

Protests were filed under 37 CFR § 1.291(a) by: (1) TouchNet Information Systems, Inc. on November 4, 1998; (2) North Communications, Inc. on March 31, 1999; and (3) Griffes Consulting, SA on August 11, 1999.

LITIGATION

Mettke v. Hewlett Packard, Co. and North Communications, Inc., No. CV-97-TMP-3160-E (N.D. Ala. filed December 8, 1997), dismissed with prejudice by Order entered December 8, 1999.

Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed March 16, 1998), dismissed with prejudice by Order entered September 21, 1998.

BACKGROUND

The invention relates to a pay-as-you-use public terminal for accessing the Internet. The original application, as filed, disclosed a public terminal for accessing online service providers (such as Prodigy and CompuServe) and Internet providers, but all but three references to the Internet were canceled. The stated purpose of this reissue is to correct Patent Owner's error in deleting references to the Internet and claims to a pay-as-you-use terminal for accessing the Internet. The background of the invention in Application 08/376,247, as originally filed, describes (page 2):

In the past few years there has been a remarkable growth in the use of commercial on-line service providers (I.E. PRODIGY, COMPUSERVE, AMERICAN ON-LINE, and DELPHI), Internet providers and use of FAX machines. The use of the above listed services are normally conducted in the home or office.

Many businesses use E-mail (through an on-line service or the Internet) to conduct day to day operations In addition, businesses constantly draw from the wealth of data bases of information available from the on-line services and the Internet.

Commercial and Internet on-line members also access the services for personal and leisure activities These services are generally accessed from fixed site locations at home or in the office. Although, portable terminals (lap top computers) with modems are available; they are often cumbersome and are not user friendly for a travelling business people or other users of on-line services or the Internet on the road.

The current pay as you use FAX machine requires users to have a hard copy document to send; and virtually none are able to receive in a user friendly configuration. In many situations, it is impractical for a user to have a hard copy document in hand to send. This invention will allow a user to create a document on screen and FAX it out, as well as provide for a header and print out a copy of the message sent. A telephone will also be located in the terminal cubicle to instruct the sender to transmit a FAX to the terminal location.

An added feature of the terminal would allow for minor word processing at its terminal. This would be a highly desirable service for business people/individuals on the go that would require its service. . . .

After listing prior art patents, the background concludes

(page 4):

Accordingly, there is no one device/apparatus that allows a user, to access, on a pay as use basis, such an array of one stop applications. The terminals would be located in such diverse locations as airports, hotels, business centers, libraries, hospitals, shopping malls and other locations as appropriate.

The object and advantages of the invention are described as follows (page 4):

Accordingly, besides the objects and advantages of this device/apparatus described previously in my patent, several objects and advantages are (some restated):

(a) Users can conveniently access commercial on-line services and the Internet at other locations other than from their fixed terminal at an office or home.

(b) Users can create, send and receive FAX's from the terminal.

(c) Users can conduct word processing operations and send the file via e-mail to another fixed terminal.

(d) Users can receive a hard copy document from a laser printer of any activity that they conduct at the terminal.

(e) Users will pay for the use of the terminal using a credit card swipe apparatus. The user will be charged for use of the terminal, telephone line use charges and additional charges by the commercial on-line service or Internet provider.

(f) Commercial on-line services and Internet providers will benefit greatly by the additional exposure/access of their services.

(g) Users will have the convenience of having easy access to the services provided by the terminal at a reasonable price; negating the need for frequent travelers to unnecessarily carry around a cumbersome laptop terminal with accessories for FAX'ing or conducting other on-line activities.

The apparatus is a "[t]erminal device which is comprised of the monitor, keyboard w/mouse, central processing unit w/internal modem (14.4 -28 BPS), integrating software, laser printer, credit

card swiping device, telephone and telephone lines" ('905 patent, col. 2, lines 42-46), as represented by block 2 in Fig. 1.

Figure 2, as originally filed, is reproduced below.

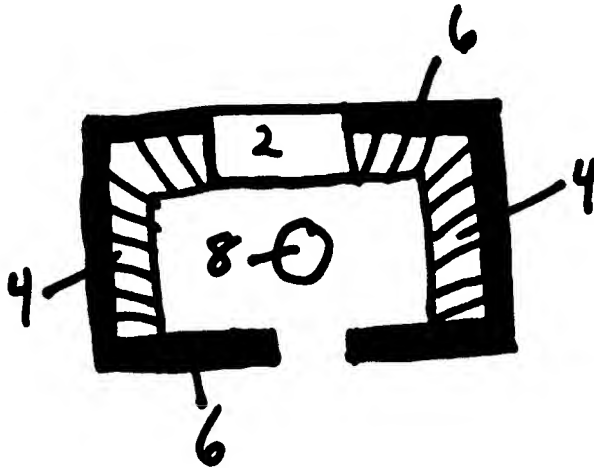


Figure 2 shows a top view of a cubicle surrounded by a wall 6 and having a desk top 4 holding the terminal 2 with a round stool 8 in front of the terminal. Patent Owner filed a substitute Fig. 2 showing the terminal in the form of a housing containing the terminal components, which the Examiner accepted and which became Fig. 2 of the '905 patent. The same Examiner in this application now has objected to Fig. 2 as new matter and has required that it be restored to the original figure (Final Rejection, p. 2).

Patent Owner responded (Amendment of April 24, 2002): "It would be obvious to some one skilled in the art that the words and meanings of 'terminal' and 'housing' are synonymous as portrayed

in the original disclosure. In, [sic] addition the prior art provided, demonstrates this contention. Where else would the components listed in the specification be housed?" (Emphasis omitted.) The Board has no jurisdiction to review "objections" to the disclosure under 35 U.S.C. § 132; the Board's jurisdiction is limited to those matters involving the rejection of claims. In re Hengehold, 440 F.2d 1395, 1404, 169 USPQ 473, 480 (CCPA 1971). Nevertheless, since Patent Owner is pro se, we note that the Examiner is correct because the original Fig. 2, as filed, did not show the components arranged in a unitary housing as in the substitute Fig. 2. The fact that references cited in the patent disclose components in a housing does not disclose that Patent Owner's components are in a housing. A "terminal device" does not imply a unitary housing, the various components of CPU, display, keyboard, printer, etc. can be separate components on a desk as with most home computers. The patent law is very strict about new matter in the specification and claims. A claim to a housing would properly be rejected for lack of written description since what would have been obvious is not the test for written description. See Lockwood v. American Airlines Inc., 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1968 (Fed. Cir. 1997) ("One shows that one is 'in possession' of the invention by describing the invention, with all of its claimed limitations, not that

which makes it obvious."). Patent Owner has properly canceled references to a "housing" in claim 6.

Claims 6-9 are reproduced below.

6. A public on-line, pay-as-you-use communications terminal comprising:

- a central processing unit (CPU);
- a telephone access node;
- an internal modem coupled to the CPU and telephone access node;
- a video display monitor coupled to the CPU;
- a keyboard for providing user interface coupled to the CPU;
- a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;
- means for accessing the Internet and allow for user interaction;
- software installed into the CPU to allow interface with the Internet and credit card service centers; and
- a printer coupled to the CPU.

7. The terminal of claim 6, wherein the means for accessing includes a keyboard which communicates with and controls a microprocessor.

8. The terminal in accordance with claim 6 also including program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. The terminal of claim 6, wherein the terminal comprises a CPU, monitor, credit card reader swipe device, internal modem and printer.

THE REFERENCES

The examiner relies on the following references:

Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).

VISION . . . POWER . . . VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).

Rawn Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.) (hereinafter "Shah").

The World Wide Web Conferences, 1994-1995 Kiosk Papers, <http://www.visi.com/~keefner/pdfs/twwwc.htm>, pp. 1-3 (of 113) (hereinafter the "1994-1995 Kiosk Papers") (not prior art).

THE REJECTIONS

We refer to the Final Rejection (pages referred to as "FR__") entered March 12, 2002, and the Examiner's Answer (pages referred to as "EA__") entered August 17, 2005, for a statement of the Examiner's rejection, and to the Revised Appeal Brief (pages referred to as "Br__") filed March 20, 2005, for a statement of Patent Owner's arguments thereagainst.

Dependent claim 7 stands rejected under 35 U.S.C. § 112, first paragraph, based on lack of written description for the limitations that a keyboard "controls a microprocessor" and for a "microprocessor" in addition to the claimed CPU.

Claims 6-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Exhibit E, Exhibit F, and Shah. The 1994-1995 Kiosk Papers article is cited to show that Shah was publicly accessible at the time of filing and, therefore, a prior art "printed publication." The Examiner finds that one difference between the subject matter of claim 6 and Exhibit E is that Exhibit E does not expressly disclose software to allow interaction with credit card centers (FR6). The Examiner finds that Exhibit F teaches the use of software to carry out communication functions and concludes that it would have been obvious to use software "within the TouchFax terminal of Exhibit E to carry out its communication functions with the credit card centers in order to authorize payments made via the credit card reader" (FR6). The Examiner finds that the difference between the subject matter of claim 6 and the combination of Exhibits E and F is that Exhibits E and F do not specify accessing and interfacing with the Internet (FR6). The Examiner finds that Shah teaches the desirability of providing access to the Internet in a kiosk-based information system to provide users with the many services on the Internet and concludes that "[i]t would have been obvious to an artisan of ordinary skill to incorporate such means for accessing and software for interfacing with the Internet in a kiosk information

system, as taught by the Shah article, within the combination of Exhibits E and F in order to provide users with access to the many services available on the Internet" (FR7).

DISCUSSION

Attachments

For convenience, a copy of the references and other documents mentioned are attached to this opinion, except for the videotape Exhibit C.

Written description

The written description requirement of 35 U.S.C. § 112, first paragraph, is used to reject when a claim is added or amended to recite a limitation without support in the original disclosure. See In re Rasmussen, 650 F.2d 1212, 1214-15, 211 USPQ 323, 326 (CCPA 1981). The specification must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. See Vas-Cath Inc. v. Mehurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991). Satisfaction of the written description requirement does not require the description to be in ipso verbis (in the identical words) antecedence in the originally filed application. See In re Lukach, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971).

Initially, it is noted that Patent Owner proposed canceling claim 7 (in response to the § 112 rejection) and claim 9 (in response to an objection that it was in improper dependent form for failing to further limit the subject matter of claim 6) by the amendment after final rejection received April 24, 2002, but the Examiner denied entry of the amendment.

The Examiner finds that the added limitation, "a keyboard which communicates with and controls a microprocessor," is not supported by the original disclosure because it makes no mention of the keyboard controlling a microprocessor (FR4).

Patent Owner refers (Br6-7) to the description of U.S. Patent 4,374,381 in the list of prior art in the '905 patent, which states "[a] touch terminal which communicates and controls a microprocessor" ('905 patent, col. 1, lines 43-44).

The Examiner responds that the original disclosure does not describe the keyboard controlling a microprocessor, because "[c]ommunication and control are two different functions" (EA7).

We will not sustain this reason for the rejection. Although a description of prior art is not a written description of the invention, the original disclosure does describe a keyboard connected to the CPU. One of ordinary skill in the art would find it inherent that a keyboard controls a CPU by causing it to

perform functions entered by the keystrokes. No new function is introduced.

The Examiner also finds that there is no provision in the original disclosure for a "microprocessor" in addition to the CPU already recited in claim 6.

Patent Owner does not respond to this reason.

We agree with the examiner that the disclosure does not discuss both a CPU and a microprocessor. Nor is it clear that the "microprocessor" and the "CPU" are intended to refer to the same thing. Because of the use of the indefinite article "a" in "a keyboard," it is not even clear that the keyboard is the keyboard in claim 6.¹ This appears to be a misuse of terminology by Patent Owner, but, nevertheless, the limitation, as presented, is not supported.

The written description rejection of claim 7 is sustained.

¹ Since Patent Owner is pro se, we explain that, as a matter of claim draftsmanship, the first time an element is introduced it is referred to using the indefinite article "a" or "an," and when later referring back to a previously mentioned element, it is referred to using a definite article, such as "the" or "said," so that readers know that it refers to the previous element. When an element is introduced the first time using a definite article, the claim is usually rejected under 35 U.S.C. § 112, second paragraph, as indefinite for "lack of antecedent basis."

The references are prior art "printed publications"

Patent owner argues that Exhibit E, Exhibit F and Shah are not prior art.

Whether a reference is prior art under 35 U.S.C. § 102 is a question of law. See Panduit Corp. v. Dennison Mfg. Co.,

810 F.2d 1561, 1568, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987).

Whether a given reference is a "printed publication" depends on whether it was "publicly accessible" during the prior period.

See In re Wyer, 655 F.2d 221, 226, 210 USPQ 790, 794 (CCPA 1981).

A given reference is "publicly accessible"

upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation.

Id. (quoting I.C.E. Corp. v. Armco Steel Corp., 250 F. Supp. 738, 743 (S.D.N.Y. 1966)). The requirement of public accessibility can be satisfied under a variety of conditions, including when there has been a meaningful distribution, indexing, or display of the material to the public interested in the art. See generally In re Klopfenstein, 380 F.3d 1345, 72 USPQ2d 1117 (Fed. Cir. 2004).

The original purpose for the "printed" requirement, that printing increases the probability that a reference will be

available to the public, has largely been made redundant by changes in document duplication, data storage, and data-retrieval systems. See Wyer, 655 F.2d at 226, 210 USPQ at 794. "Printed publication" is now addressed as a unitary concept where "the question to be examined under § 102(b) is the accessibility to at least the pertinent part of the public, of a perceptible description of the invention, in whatever form it may have been recorded." Id. "[A] printed document may qualify as a 'publication' under 35 U.S.C. § 102(b), notwithstanding that accessibility thereto is restricted to a 'part of the public,' so long as accessibility is sufficient 'to raise a presumption that the public concerned with the art would know of [the invention].'" In re Bayer, 568 F.2d 1357, 1361, 196 USPQ 670, 674 (CCPA 1978).

A "printed publication" need not actually be seen by anyone; if the document was available and accessible so that a hypothetical person of ordinary skill in the art exercising reasonable diligence could have found it. The document is prior art because of its constructive placement into the public domain. Many of the cases on "printed publication" deal with the question of accessibility to the document by a hypothetical person of ordinary skill; that is, whether there is constructive knowledge by the public. See Bayer (unshelved and uncataloged master's

thesis accessible only to graduate committee prior to critical date not sufficiently accessible to public to constitute a "publication"); Wyer (application microfilmed and diazo copies deposited at five sub-offices of Australian Patent Office constitutes printed publication); In re Hall, 781 F.2d 897, 228 USPQ 453 (Fed. Cir. 1986) (single cataloged doctoral thesis deposited in a library in Germany prior to the critical date was a printed publication as of that date); In re Cronyn, 890 F.2d 1158, 13 USPQ2d 1070 (Fed. Cir. 1989) (undergraduate thesis deposited in college library open to the public but neither cataloged nor indexed in meaningful way is not a printed publication because it is not accessible to the public); Bruckelmeyer v. Ground Heaters, Inc., 445 F.3d 1374, 78 USPQ2d 1684 (Fed. Cir. 2006) (two canceled drawings remaining in Canadian patent's file wrapper were printed publications because a person of ordinary skill in the art interested in the subject matter and exercising reasonable diligence would be able to locate them).

Exhibit E

Patent Owner argues that Exhibit E appears on its face to be an article in the October 1992 journal entitled "Interactive World," but that he "has been unable to determine where to access 'Interactive World,' or what individuals had access to Exhibit E

at any time prior to the filing date of this application, i.e., January 23, 1995" (Br10). Patent owner argues that a "representative of the appellant searched the catalogs of Rice University and the University of Houston, two of the largest library collections in the fourth largest city in the United States and was unable to locate any journal entitled 'Interactive World'" (Br12) and "submits that Exhibit E is not prior art that can be cited against the claims of this application" (Br12).

The Examiner responds that Exhibit E is an article from the magazine "Interactive World," which is clearly a printed publication (EA7).

The Examiner does not address Patent Owner's arguments. On its face, Exhibit E is a printed magazine article, which is presumed to be distributed and publicly accessible. Nothing about Exhibit E suggests that it is not what it seems or that it was somehow fabricated for purposes of litigation. Patent Owner's statement that his representative was unable to find "Interactive World" in the catalogs of Rice University and the University of Houston is not in the form of an affidavit or declaration, but, in any case, looking in only two libraries is hardly evidence of reasonable diligence. The magazine is clearly a specialized publication that would not be expected to appear in every library. Several years worth of the magazine are in the

U.S. Patent and Trademark Office's (USPTO's) Scientific and Technical Information Center (STIC), although not for the year 1992. An article from the November/December issue of "Internet World" is applied in a new ground of rejection and includes the publication information page. Exhibit E is a prior art "printed publication."

Exhibit F

Patent Owner argues that Exhibit F is not prior art because (Br15):

No evidence has been provided by any of the Protestors or the Examiner as to where Exhibit F can be accessed by the public, or on what date Exhibit F became accessible to the public. Exhibit F may not have been disseminated to anyone outside of Protestor's organization at any time prior to January 23, 1995.

The Examiner responds that Exhibit F is one of a series of product brochures distributed without restriction and was available to the public in March/April of 1991, as evidenced by pages 54-56 of the Deposition of Daniel J. Toughey, President of TouchFax, in Mettke v. TouchNet, No. 98-PT-596-E (EA8).

Patent Owner ignores the evidence of Mr. Toughey's deposition. Exhibit 7 in Mr. Toughey's deposition corresponds to the present Exhibit F. Mr. Toughey testifies that the brochures for Exhibit 7 were distributed and made publicly available in March/April of 1991 (Toughey deposition, p. 55, lines 15-23).

Patent Owner's attorney, who deposed Mr. Toughey, could have asked further questions if there was any doubt as to the distribution of this document. As it stands, there is testimony under oath that the copyright date of 1991 for Exhibit 7 (now Exhibit F) is when the document became publicly accessible and Patent Owner had fair opportunity to challenge this date. To the extent Patent Owner somehow thinks that Exhibit E should be presently cataloged and accessible, we note cataloging in a library is only one of many ways to qualify as a printed publication. Exhibit F was accessible from, at least, TouchNet and, since it was distributed, it was accessible to the part of the public interested in such devices. Once something becomes a printed publication, it does not cease to be a printed publication just because it later may be hard to find a copy. Exhibit F is a prior art "printed publication."

Shah

Patent owner argues that the Shah article is not prior art because the Protestors and Examiner have not provided any evidence that it was accessible to a member of the public exercising reasonable diligence (Br16). It is argued that it appears that Exhibit I was only available on the World Wide Web and was not indexed or cataloged in any library or other location accessible to the public (Br16). It is argued that a person

would have to know the name of the author to have any chance of locating the article using a search engine on the World Wide Web, because any other key terms, such as kiosk and Internet, are too generic, and knowledge of the author of an article is rarely available to the searcher (Br16).

The Examiner responds that the Shah article is mentioned in the 1994-1995 Kiosk Papers document as a paper presented at one of the three World Wide Web conferences in May 1994, October 1994, and April 1995, and its date of April 30, 1994, is consistent with the conference in May 1994 (EA9).

We conclude that the Shah article has sufficient indicia of public dissemination and access to be a prior art publication or, at least, to shift the burden of production of evidence to Patent Owner to show that it is not. The Shah article is formatted and appears on its face to be a final paper prepared for the "World Wide Web Information Kiosks Special Interest Group" that was published, complete with author information and a list of references; it is not just a draft that one would not expect to be published. The Shah article is referred to in the 1994-1995 Kiosk Papers as having been presented at one of the World Wide Web conferences and there is no reason to doubt the truth of this statement by a disinterested third party. We agree with the Examiner that the April 30, 1994, date is consistent with the

First International Conference held May 25-27, 1994, but this is not expressly stated. Nevertheless, by process of elimination it must be one of the first two conferences held in 1994. While the 1993-1994 Kiosk Papers article can still be found on the World Wide Web, "<http://www.visi.com/~keefner/pdfs/twwwc.htm>," most links are expired except for "WWW Spring '95" to "The Third International World-Wide Web Conference," "http://www.igd.fhg.de/archive/1995_www95/." This 1995 Conference Web page has a list of papers and authors and the Shah article is not among them, so we conclude that it must have been presented at one of the two 1994 conferences. In addition, the Shah article was downloaded from a Web site, "<http://www.rtd.com/people/rawn/kiosk-paper.html>" (the same URL noted in the 1994-1995 Kiosk Papers), and an earlier 1994 Shah paper in the references also has a URL, which reasonably suggests that the Shah articles were both publicly available on the Internet as of the date on the article, although not downloaded until 2/3/99. Web pages on the Internet are "printed publications." Patent Owner's argument that Shah would have been impossible to locate on the Internet is mere speculation. There is sufficient indicia to indicate that the Shah paper was publicly accessible at one of the 1994 World Wide Web conferences and on the Internet to shift the burden to Patent Owner to further investigate. See In re Epstein, 32 F.3d 1559,

1570, 31 USPQ2d 1817, 1825 (Fed. Cir. 1994) (Plager, J., concurring) (It is unreasonable "to require the PTO examiners to do any investigation suggested by available information. Since more and more information is now available on computer databases, that could require a staff of investigators far in excess of the resources currently available to the PTO. At bottom, the issue in this case is who is to bear the cost of further investigation when further investigation is thought warranted. The solution agreed to by the panel, and with which I concur, is at least for now to allow the PTO to use its immediately available data sources to identify legitimate questions that need answering, and then to place upon the applicant the burden of finding those answers."). Shah is a prior art "printed publication."

Claim interpretation

It is noted that claims 6-9 do not require that the elements be in a housing.

The limitations of claim 6 that require interpretation are "pay-as-you-use" and "payment by a user for use of the terminal." Claim 6 recites, in relevant part:

6. A public on-line, pay-as-you-use communications terminal comprising:

. . .

a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and

a printer coupled to the CPU.

Patent owner argues that the references do not disclose charging users for terminal access (Br 17):

The Shah article does not disclose or suggest that a credit card swipe device should be employed to charge a user for use of the terminal. . . . Exhibits E and F were specifically directed to charging the user for use of the service, not for use of the terminal. Neither of these references contemplated the broader and more ingenious idea of allowing access to the Internet, and then charging the user for access to the terminal.

None of the references discloses or suggests charging users for terminal access. None of the references discloses or suggests the use of a credit card swipe device to access the Internet.

The Examiner responds that "claims 6-9 do not recite charging for terminal access" (EA9), but only "for use of the terminal." The Examiner states that "Exhibit E clearly teaches a credit card reader which accepts payment by a user for use of the terminal to carry out various services, e.g. facsimile communication, word processing, high-quality copying, fax mailbox service, electronic library access" (EA9).

We agree with the Examiner's interpretation that payment for services performed on the terminal is payment for use of the

terminal. The terms "pay-as-you-use" and "payment by a user for use of the terminal" are not defined in the claims or in the specification, as payment to get onto or access the terminal, and are broad enough to include payment for use of services conducted on the terminal. In claim 6, the "means for accessing the Internet" follows the limitation of accepting payment "for use of the terminal," and claim 6 does not expressly link payment for "use of the terminal" to "accessing the Internet." Payment for "use of the terminal" could be payment "for use of the terminal" to perform a different service, such as sending a facsimile, making a copy, printing a document on the claimed printer, etc.; i.e., claim 6 does not require payment for all uses of the terminal. The software for interfacing with the Internet and credit card service centers is for two different purposes and there is no express limitation of charging a credit card for access to the Internet. Nevertheless, to prevent controversy on claim interpretation, we interpret payment for "use of the terminal" to be payment for the service of accessing the Internet on the terminal.

Obviousness

Factual findings

Scope of the art

Patent Owner's disclosed field of endeavor appears to be best defined as pay-per-use public communication terminals, and the particular problem with which he was concerned in claim 6 was providing access to the Internet. Exhibits E and F relate to pay-for-use public communication terminals and are within the inventor's field of endeavor. Shah relates to providing Internet access in a public communications terminal and is in the field of public communications terminals and is at least pertinent to the problem of providing Internet access in a public terminal. There is no dispute that the references are within the scope of the prior art; i.e., that they are from analogous art. See In re Deminski, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986) (the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned); Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535, 218 USPQ 871, 876 (Fed. Cir. 1983) ("The scope of the prior art has been defined as that 'reasonably pertinent to the particular problem with which the inventor was involved'.").

Content of the references

Exhibit E discloses a free-standing pay-for-use TouchFax TF750 public communications terminal (kiosk) for locations such as airports, hotels, truck stops, and supermarkets (p. 48). Services include phone, fax, computer, word processing, copying, and information services. The TouchFax terminal has a microprocessor, a touch-screen monitor, a data port for modem and laptop connections, a full-size keyboard, and a laser printer (p. 49, left col.). "Payment for services is made using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping." (P. 49, left col.) The user can connect via a modem to the Official Airline Guide (OAG) database and receive a facsimile report (p. 49, right col.). Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49).

Exhibit F discloses a "TF700 Public Communications Terminal from TouchFax," in a stand-alone housing including a telephone, speaker, touch-screen monitor, a credit card reader for payment of services, a full-sized keyboard for "computer database access or word processing," an option panel, a flatbed scanner, a 386 CPU, and a laser printer. Services include "telephone, send or

receive a fax, photocopying, word processing and laser printing, and access to a growing number of information databases from Wall Street news to international sports scores." Exhibits E and F essentially describe the same terminal, the differences being that the TF750 had a sloped countertop instead of the flat countertop in the TF700, and the TF750 had the keyboard in the countertop instead of a motorized retractable keyboard in the TF700. See Deposition of Daniel Toughy, President of TouchFax, in Civil Action No. 98-PT-596-E, pp. 55-59 (Exhibit 7 in deposition corresponds to Exhibit F in TouchFax protest and this appeal, and Exhibit 12 in deposition corresponds to Exhibit E in TouchFax protest and this appeal).

Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract). Shah discloses that the advantages of using the Web are its popularity, it is already a multimedia tool, the user will have access to the many services on the Internet, and it is an accepted standard as opposed to a proprietary system (pp. 1-2). The kiosk includes input, output, processing, and network connection hardware, and Web browser software (p. 2 under "The Access Interface"). Shah states that entities that might implement a kiosk-based information system include "Commercial Information Referral organizations who wish to provide a paid

service through such kiosks" (page 3). Shah states (page 5):
"Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server."

Differences

The Examiner finds that one difference between the subject matter of claim 6 and Exhibit E is that Exhibit E does not expressly disclose software to allow interaction with credit card centers (FR6).

The Examiner finds that difference between the subject matter of claim 6 and the combination of Exhibits E and F is that Exhibits E and F do not specify accessing and interfacing with the Internet (FR6).

Level of ordinary skill in the art

Although examiners seldom make an express finding as to the level of ordinary skill in the art, the level of ordinary skill in the art is evidenced by the references. See In re Oelrich, 579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("the PTO usually must evaluate both the scope and content of the prior art and the level of ordinary skill solely on the cold words of the literature"); In re GPAC Inc., 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995) (the Board did not err in adopting

the approach that the level of skill in the art was best determined by the references of record); Okajima v. Bourdeau, 261 F.3d 1350, 1355, 59 USPQ2d 1795, 1797 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown.'"). Skill in the art is presumed. See In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

Objective evidence of nonobviousness

No objective evidence of nonobviousness has been presented.

Motivation

The Examiner finds that the communication software in Exhibit F suggests the use of communication software to communicate between the credit card reader device in Exhibit E and a credit card center.

The Examiner finds that Shah teaches the desirability of providing access to the Internet in a kiosk-based information system in order to provide users with the many services on the Internet (FR6).

Analysis

The claims stand or fall together with claim 6.

Patent owner argues that Exhibit E fails to disclose or suggest linking the facsimile kiosk with the Internet, and never discusses the Internet, much less accessing the Internet on a pay-as-you-go basis (Br12-14, Issue 3.A). It is argued that "Exhibit E does suggest that the kiosk may be used to access 'information databases,' but only in the context of receiving facsimile transmissions from these databases" (Br12) and, thus, Exhibit E lacks at least the claim limitation of "means for accessing the Internet." It is argued (Br13-15) that the Examiner errs in stating that Exhibit E teaches the limitation of "means for accessing commercial on-line services."

The Examiner responds that Shah is relied upon for its teaching of Internet access via a kiosk (EA8). The Examiner notes that "means for accessing commercial on-line services" does not appear in the Final Rejection (EA8).

Nonobviousness cannot be established by attacking the references individually where the rejection is based upon the teachings of a combination of references. See In re Merck & Co., 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986). That is, it is not persuasive to argue that Exhibits E and F do not teach Internet access when the rejection relies on Shah for this

feature, or to argue that Shah does not teach charging for use of the terminal services when Exhibits E and F are relied upon for this feature. Shah teaches, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. Shah suggests that consumers wanted access to the Internet for these services. One of ordinary skill in the art would have been motivated to provide Internet access as an additional pay-for-use service in the public kiosks of Exhibit E and F to achieve this advantage and consumer demand. Since Exhibits E and F have dates of 1992 and 1991, respectively, before the Internet became widely accessible, it is not surprising that they do not mention the Internet. However, technology is not static and it would be expected that the kiosks would be updated to incorporate improvements in technology, such as access to the Internet, that may not have been foreseen at the time. Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax to provide public online services and public Internet access as those features became common at home and business.

The Examiner did find that Exhibit E teaches "means for accessing commercial on-line services" in the first Office action of August 25, 1999, and the second Office action of June 11, 2001, but did not repeat it in the Final Rejection. It is the examiner's Final Rejection that is reviewed in an appeal under 35 U.S.C. § 134, see In re Webb, 916 F.2d 1553, 1556, 16 USPQ2d 1433, 1435 (Fed. Cir. 1990), but even if the statement had been in the Final Rejection and Examiner's Answer, it would not be reversible error unless it was critical to the merits of the rejection.

Patent owner argues (Br15, Issue 3.B): "Exhibit F fails to disclose, teach or suggest software installed into the CPU to allow interface with the internet and credit card service centers. . . . Furthermore, nothing in Exhibit F discloses, teaches, suggests, or even hints, that the facsimile kiosk is interconnected with the internet."

The Examiner responds that Shah is relied upon for its teaching of Internet access via a kiosk (EA8, two places). The Examiner states that Exhibit F discloses that "TouchNet network management software collects usage and billing data" and discloses a credit card reader allowing payment by major credit cards (EA8).

Neither Exhibit E nor Exhibit F expressly discloses software for interfacing with credit card service centers. Exhibit F states that "TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location." The "network management software" provides management functions and does not suggest communication with credit card centers. Nevertheless, we find that one of ordinary skill in the art of credit-card-based point-of-sale terminals at the time of the invention would have understood that connection of the credit card reader to a credit card center for authorization and charging is implied in both Exhibits E and F; indeed, we think that the average person was aware that credit card readers were connected to credit card centers for charge authorization. Patent Owner does not appear to contest that Exhibits E and F teach, or at least suggest to one skilled in the art, connection of the credit card reader device to a credit card center. As for connection to the Internet, the rejection is based on the combination with Shah, which teaches the use of Web browser software to provide access to the Internet. As discussed in connection with Exhibit E, nonobviousness cannot be established by attacking references individually where the rejection is based

upon a combination of references, and Shah would have motivated one skilled in the art to provide Internet access in a public kiosk environment.

Patent Owner argues that Shah does not teach the use of any software for interfacing with credit card service centers and there is no discussion regarding how a user would pay for the use of the kiosks (Br16). It is argued that the Examiner erred in relying on the commercial organizations at pages 3 and 5, because it is argued that "the commercial organizations' role with the kiosks is as an owner or the kiosk who charges users for the time display an advertisement" (Br16). It is argued (Br16-17):

The Shah article does not discuss the commercial organizations as providing any specific services, let alone charging for Internet access. Furthermore, nothing is disclosed in the Shah article regarding how these commercial organizations will be paid, let alone, the payment by credit card, at the physical location of the kiosk, utilizing software for interfacing with credit card service centers.

The Shaw article does not disclose or suggest that a credit card swipe device should be employed to charge a user for use of the terminal. The Shah article does not discuss the use of a credit card swipe device. It does not specify accessing and interfacing with the Internet.

The Examiner responds that Exhibit E provides a credit card reader to allow payment for services on the terminal (EA9).

Again, nonobviousness cannot be established by attacking references individually where the rejection is based upon a combination of references. We agree with the Examiner that

Exhibit E teaches payment for the use of terminal services using a credit card and credit card reader. Exhibit F also teaches these limitations. Shah states that entities that might implement a kiosk-based information system include "Commercial Information Referral organizations who wish to provide a paid service through such kiosks" (p. 3) and "Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server" (p. 5). Shah does not teach how payment for documents or services would be made, which is why Exhibits E and F are cited.

Patent Owner argues that there is no motivation for the combination, generally citing case law that there must be a reason to combine references (Br10-12; Br17; Br19).

The Examiner repeats the obviousness reasoning (EA10-11).

We conclude that the Examiner has established a prima facie case of obviousness, including motivation for the combination. Patent Owner provides no reason why one skilled in the art would not have been motivated to provide Internet access in the public kiosk environment of Exhibits E and F given Shah's teaching of a public kiosk to allow users access to the many services available on the Internet.

Patent owner discusses European Patent EP 0486160 A2, published May 20, 1992 (Br 18-19, Issue 3.D). The European Patent was cited by the Examiner in the Notice of Defective Brief entered July 13, 2004, (page 3) as pertinent, but not relied upon, as showing a multi-purpose facsimile transmission terminal, which is said to correspond to the TouchFax terminal in the TouchFax article (Exhibit E) and the TouchFax brochure (Exhibit F).

Since the European Patent was not made part of the rejection, it cannot be considered. The statement of the rejection must expressly contain a mention of all references applied in the rejection. See In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970); Ex parte Movva, 31 USPQ2d 1027, 1028 n.1 (Bd. Pat. App. & Int. 1993). The European Patent describes that the terminal is "credit card activated" (col. 1, line 23; see also col. 3, lines 9-10) and describes that "the computer operating program provides a charge by selection, such as fax services, a charge by time used, a charge by the number of pages sent or received, and a charge for the class of telephone calls, whether local, long distance or international" (col. 5, lines 28-32). Although these might be useful additional teachings in the rejection, these teachings

cannot be attributed to or used to fill in any blanks in Exhibits E and F and the Shah article.

Patent owner refers to a statement by Mr. Greg Adank, acting Director of Information Management, Fort Leonard Wood, Missouri, and states that "Mr. Adank has provided an independent analysis of the three items of prior art (Exhibits E, F and I . . .)" (Br20) and "has also provided a straight forward matrix in his analysis that crosswalks the elements of the Appellant[']s claims and the prior art cited by the examiner" (Br20).

The Examiner responds that the statement is not in affidavit or declaration form and is not considered (EA10).

It is not apparent that Mr. Adank's statement adds anything to Patent Owner's arguments. Mr. Adank finds that the TouchFax exhibits do not teach access to online services or the Internet and the Shah article does not teach offering access to the Internet on a point-of-sale basis (p. 6). The Examiner's rejection admits this much. Mr. Adank's statement does not address the questions of motivation and obviousness.

Patent owner argues (Br20-21): (1) the invention provides an unexpected result, specifically a point-of-sale terminal to access the Internet; (2) it was a crowded art; (3) the references do not suggest the modification; (4) the references do not teach what the Examiner says they do, specifically point-of-sale

terminal to access the Internet; (5) the Examiner relies upon a strained interpretation that could only be made by hindsight, as demonstrated by the Examiner's refusal to consider the matrix provided by Mr. Adank; (6) the invention solves a different problem than the references; (7) the Examiner has not provided a convincing line of reasoning as to why the subject matter as a whole would have been obvious; (8) the references do not contain any express or implied suggestion to be combined; (9) it would be necessary to make modifications not taught by the prior art to combine the references in the manner suggested by the Examiner; and (10) that fact that three references must be combined is unequivocal evidence of nonobviousness.

The Examiner responds to (1) that Patent Owner fails to provide any evidence or facts in support of the argument (EA10), and to (10) that the number of references does not, without more, weight against the obviousness of the claimed invention, citing In re Gorman, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991). The Examiner does not address the other points of argument.

We agree with the Examiner's response to (1). Mere allegations of "unexpected results" are not sufficient to show nonobviousness. An "unexpected result" is where the claimed invention achieves more than a combination which any or all of the prior art references suggested. We do not see how paying for

use of a terminal to access the Internet could ever provide an "unexpected result." We also agree with the Examiner's response to (10). Patent Owner's other arguments are token arguments and not persuasive. As to (2), Patent Owner has not demonstrated that it was a crowded art and, if so, how that should affect the obviousness analysis. As to (3), (4), (7), and (8), we find that the references do suggest the modification of adding Internet access to a pay-per-use public terminal. As to (5), it is not clear how the Examiner's refusal to consider Mr. Adank's statement can be considered evidence of hindsight; since we find motivation, the rejection is not based on hindsight. As to (6), Patent Owner has not explained how the problems are different, but, in any case, motivation in the prior art to combine the references does not have to be identical to that of the applicant to establish obviousness. See In re Dillon, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901-02 (Fed. Cir. 1990) (en banc) (holding that an invention may be obvious for reasons the inventor did not contemplate) (overruling-in-part In re Wright, 848 F.2d 1216, 6 USPQ2d 1959 (Fed. Cir. 1988)). In addition, if Patent Owner's problem is defined as how to provide Internet access in a public terminal, this is the problem addressed by the combination of references. As to (9), Patent Owner has not said what other

modifications, not taught by the references and not discussed by the Examiner, are necessary to arrive at the claimed invention.

For the reasons stated above, we conclude that the Examiner has established a prima facie case of obviousness, which has not been shown to be in error. The rejection of claims 6-9 is sustained.

NEW GROUNDS OF REJECTION PURSUANT TO 37 CFR § 41.50(b)

In view of the importance of this case, as evidenced by the two civil actions resulting from the '905 patent and by the three protests, as well as the age of this reissue, we feel that new grounds of rejection are appropriate to put the best prior art on record in a rejection and, in particular, to provide an express teaching of paying for access to the Internet.

References

The following prior art is cited in support of a new ground of rejection.

TOUCHFAX AMERICA, video tape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex in Atlanta, Georgia,² © 1993 TouchFax Information Services, Inc., (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA).

² See Deposition of Daniel Toughey in Mettke v. TouchNet, No. CV-98-PT-596-E, pp. 40-53, discussing Exhibit 5 to deposition.

TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).³

Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).⁴

VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).⁵

Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA) (hereinafter "L&G ISDN console").

Paul Gilster, The Internet Navigator (2d ed. John Wiley & Sons, Inc. 1994⁶), pp. 15-18, 24, 25, 56, 57, 195, 221-225 (hereinafter "Internet Navigator").

Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. cover, index (2 pages), 82-84 (hereinafter "Aliens").

On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis (hereinafter "On Haiti").

We conclude that all references are prior art "printed publications." TouchFax Exhibit C through Exhibit F were publicly distributed as discussed in the deposition of Daniel Toughey, President of TouchFax (pages of deposition noted in footnotes). TouchFax Exhibits E and F were also previously

³ Id. at pp. 20-25, discussing Exhibit 3 to deposition.

⁴ Id. at pp. 58-59, discussing Exhibit 12 to deposition.

⁵ Id. at pp. 55-56, discussing Exhibit 7 to deposition.

⁶ Published August 25, 1994, according to the copyright records at "<http://copyright.gov>."

discussed to be prior art. The L&G ISDN console brochure was publicly distributed as evidenced by the declaration of Adolf Deyhle (Exhibit E to Griffes Protest).

New grounds of rejection

Claim 9 is rejected under 35 U.S.C. § 112, fourth paragraph, as failing to further limit claim 6 from which it depends.

Claim 9 merely repeats all of the elements of claim 6.

Claims 6-9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti, for reasons to be discussed.

Claim interpretation

We interpret "pay-as-you-use" and "payment by a user for use of the terminal" to require payment for use of the terminal to access the Internet.

Obviousness

Factual findings

Scope and content of the prior art

Scope

Patent Owner's field of endeavor appears to be best defined as pay-per-use public communication terminals, and the particular problem with which he was concerned was providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals and are within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access. Thus, we find the references to be within the scope of the prior art.

Content

Exhibit C is a videotape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex trade show in Atlanta, Georgia. The video tape advertises the use of the TouchFax kiosks for a variety of purposes including pay-per-use access to the Prodigy online computer service provider and for connection to the Internet,

although no kiosks had been built to perform these functions.⁷ Exhibit C, 1 is a printout of a video frame showing the opening title and production date of May 14, 1993. Exhibit C, 2 is a printout of a video frame showing a customer inserting a credit card into the TouchFax unit to activate the unit. Exhibit C, 3 is a printout of a video frame which specifically advertises connection to the Prodigy Information Service, a well-known online computer service provider in 1993. Exhibit C, 4 is a printout of a video frame which specifically advertises connection to the Internet. Exhibit C, 5 is a printout of a

⁷ See Deposition of Daniel Toughey in Civil Action No. 98-PT-596-E, pp. 44-45, indicating that video was a marketing tool, intended to show possible uses:

Q: (By Mr. Polasek [Attorney for Patent Owner]) Now that we have been able to stop the tape, it shows a rectangular gold block labeled [sic] internet. I think it is right at -- I thought it was the 36 second mark. It may be 34.

MR. STITT [Attorney for Defendant]: It appears to be 34.

Q: (By Mr. Polasek) Did that provide for access to the internet? If the user was to touch that icon, I guess it what you would call it, that portion of the TouchNet screen, does that enable a user to gain internet access or do you know?

A: Not at that time, no. That was like MCI mail above it. Those are possible uses for the system. And so the reason we built this video was to sell our systems. And so, again, the vision of TouchFax, TouchNet was its multipurpose information communication terminal that, depending on what our customers, whoever owned these things wanted to provide, they could provide that type of information.

video frame showing a user at a TouchFax unit using the keyboard and showing the credit card reader device. Exhibit C, 2 is a printout of a video frame showing a second display of the Prodigy Information Service being offered and being advertised in the video tape as an online connection option.

Exhibit D is a diagram teaching use of a TF750 Public Terminal as a data and communications system. Exhibit D teaches a system which includes a "TouchFax Electronic Library" which serves as a "Gateway to Fax & Computer Services." The computer services include an "on-line interactive data base" including "CompuServe, Prodigy" online providers.

Exhibits E and F have been previously described.

The Internet Navigator describes that the Internet is a network of networks, which is made from computers and cables (p. 15). The Internet provides many different applications or services, such as e-mail (electronic mail), file transfer, and remote login (pp. 24-25). Commercial online services,⁸ such as

⁸ "Online service provider" is defined in "http://en.wikipedia.org/wiki/Online_service," where the original meaning is what applied in 1994:

An online service provider, in modern usage refers to an entity which provides a service online. It can include internet service providers and web sites, such as Wikipedia's or Usenet (commonly accessed through Google Groups). In its original more limited definition it referred only to a commercial computer communication service in which paid members could dial via a computer modem the service's private computer network and access various services and

CompuServe, were centralized as opposed to distributed like the Internet (pp. 17-18). "[C]ommercial providers such as CompuServe, GENie, and Prodigy have all made Internet mail access available" (p. 16; see also, pp. 57, 195; e-mail at pp. 221-225).

Thus, many online service providers, such as Prodigy, provided access to the Internet via e-mail. The World Wide Web (WWW) is a collection of documents linked by hyperlinks and URLs (pp. 388-396) and is a service that runs on the Internet.⁹ The claims recite access to the Internet, not to the WWW, and are met by access to one service on the Internet, such as e-mail.

Aliens describes that online service providers such as America Online, CompuServe, GENie, and Prodigy were providing access to more features of the Internet in 1994. It is stated

information resources such a bulletin boards, downloadable files and programs, news articles, chat rooms, and electronic mail services. The term "online service" was also used in references to these dial-up services. The traditional dial-up online service differed from the modern Internet service provider in that they provided a large degree of content that was only accessible by those who subscribed to the online service, while ISP mostly serves to provide access to the internet and generally provides little if any exclusive content of its own.

⁹ "[T]he Internet and the World Wide Web are not synonymous: the Internet is a collection of interconnected computer networks, linked by copper wires, fiber-optic cables, wireless connections etc.; the Web is a collection of interconnected documents, linked by hyperlinks and URLs, and is accessible using the Internet. The Internet also provides many other services including e-mail, file sharing and others"
"http://en.wikipedia.org/wiki/Internet."

that many of the services have offered e-mail gateways to the Internet for some time; e.g., "Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time" (p. 83); "GENie has been offering an e-mail gateway to and from the Internet for several years, but nothing more" (p. 84); "Prodigy already has an e-mail gateway to the Internet ..." (p. 84). This qualifies as "access to the Internet." Aliens also describes that online services have charged hourly fees for Internet services (p. 84).

L&G ISDN console describes a free-standing ISDN (Integrated Services Digital Network, an international standard for switched, digital dial-up telephone service for voice and data) payphone capable of accessing Videotex services available to the general public. Videotex was the first attempt at interactive information delivery for shopping, banking, news, etc. Videotex uses a box and keyboard associated with a video display. Data are delivered by phone line and stored in the box as predefined frames with limited graphics that are retrieved by menu.¹⁰ The payphone has a telephone access node (required in a payphone); a credit card reader; a video display monitor; a keyboard; a modem (inherently required to connect to the Videotex service); means (software and hardware) to access commercial online Videotex

¹⁰ See "<http://en.wikipedia.org/wiki/Videotex>."

services; and must contain a microprocessor. "The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal." "For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data." "[Videotex] services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour." No printer is disclosed.

On Haiti describes that "'Cyberia' -- a 'cyberspace cafe' -- has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour." The computers for this cafe inherently must have a CPU, monitor, keyboard, modem, means for accessing the Internet and allowing user interaction, and software installed into the CPU to allow interface with the Internet. There must inherently be telephone access node to allow access to the Internet. Thus, On Haiti discloses payment for use of a terminal access to the Internet, but does not describe payment using a credit card, or a credit card reader swipe device connected to a credit card service center, and does not describe a printer.

Differences

The differences between the subject matter of independent claim 6 and the pay-for-use public TouchFax terminal of Exhibits E and F is that Exhibits E and F: (1) do not expressly disclose connecting to a credit card center; (2) do not disclose providing access to the Internet; and, so, (3) do not disclose charging for using the computer terminal to access to the Internet.

The differences between the subject matter of independent claim 6 and On Haiti are that On Haiti does not describe:

- (1) payment using a credit card via a credit card reader swipe device connected to a credit card service center; and
- (2) a printer.

Level of ordinary skill in the art

The level of ordinary skill in the art is evidenced by the references, as previously noted.

The references of record demonstrate that those of ordinary skill in the relevant arts knew: (1) pay-for-use public communications terminals providing for pay-for-use telephone, facsimile, computer, and communication services were well known, see Exhibits C-F and L&G ISDN console; (2) access to the Internet, at least to e-mail services on the Internet, was commonplace in 1994 and was provided by online service providers, such as CompuServe and Prodigy, see Internet Navigator and

Aliens; (3) online service providers were starting to provide access to more than e-mail services on the Internet in 1994, see Aliens; (4) charging for use of a public computer terminal to access the Internet was known, see On Haiti.

In addition, although not relied upon in this rejection, we note that Patent Owner's expert Mr. Adank described the knowledge of those of ordinary skill in the art in his "General Observations" (p. 1):

Typical home and business computers (Intel based 286/386 and other compatible class processors) were capable of performing all tasks and features described in your background description of prior art. Specifically, those systems were capable of sending and receiving faxes via internal or external modem, generating electronic documents and printing or faxing them to a remote terminal, communicate with on-line service providers (Prodigy, CompuServe, AOL), as well as to be used to communicate on the Internet via Internet service provider (ISP). The ability to couple a credit card reading device to a computer terminal was also common place during this time as many point-of-sale devices (i.e. cash registers) were in fact systems built from the core components found inside a computer terminal.

Objective evidence of nonobviousness

There is no objective evidence of nonobviousness.

Motivation

The motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all exhibits are from the same corporation, TouchFax, and expressly teach modifications,

variations, and improvements to a pay-for-use public communications terminal. Thus, the teaching of Internet access in Exhibit C suggests modifying Exhibits E and F to provide Internet access, and the teaching on providing access to online service providers in Exhibit D suggests modifying Exhibits E and F to provide access to online service providers.

Since Exhibit C to Exhibit F disclose pay-for-use public terminals, this suggests payment for use of any service provided by the terminal, including services that may be added later.

L&G ISDN console teaches connection of a credit card reader to a credit card center for authorization and collection of credit card charges, which expressly provides motivation for connecting credit card readers to a credit card center, if proof of this common fact is needed.

Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49), which suggests modification of the terminal to provide services on a public terminal as those services become common at home and business.

On Haiti discloses payment for use of a public terminal to access the Internet, which expressly provides motivation for charging for Internet access in other public terminals.

The Internet Navigator and Aliens teach that online service providers provided access to e-mail services on the Internet in 1994, which expressly suggests that any access to online service providers in 1994 would have provided access to the Internet.

Analysis

"[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art." In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). "The question is whether it would have been obvious to one of ordinary skill in the art, working with the . . . [prior art] references before him, to do what the inventors herein have done" Id. at 425, 208 USPQ at 881-82. The collective teachings of the references do not depend on the order in which the references are modified. See In re Bush, 296 F.2d 491, 496, 131 USPQ 263, 267 (CCPA 1961) ("In a case of this type where a rejection is predicated on two references each containing pertinent disclosure which has been pointed out to the applicant, we deem it to be of no significance, but merely a matter of exposition, that the rejection is stated to be on A in view of B instead of on B in view of A, or to term one reference primary and the other secondary."). We have applied more than the minimum number of references needed to meet the claims in order to provide evidence of the level of ordinary skill in the

art and motivation, and to show different ways to approach the obviousness question.

We approach the obviousness issue from two directions. First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we then show why it would have been obvious to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer.

(1)

Exhibits E and F describe essentially the same pay-for-use public communications terminal providing services of receiving and sending facsimiles, word processing, copying, and printing. Although Exhibits E and F do not expressly teach that the terminal connects the credit card reader to a credit card service, one of ordinary skill in the art of credit-card-based point-of-sale terminals at the time of the invention would have understood that connection of the credit card reader to a credit card center for authorization and charging is implied in both Exhibits E and F; indeed, we think that the average person was

aware that credit card readers were connected to credit card centers for charge authorization. Patent Owner did not contest that Exhibits E and F teach this feature. Nevertheless, L&G ISDN console teaches a credit card reader in a public communications terminal, which communicates with a credit card service center ("For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.") and one skilled in the art would have been motivated to add a connection to the credit card center in Exhibits E and F to provide authorization of cards and collect amounts charged for communication services. Exhibits E and F disclose "causing the printer to print a receipt or any other document available from a commercial on-line service," as recited in claim 8, because Exhibit E discloses "terminal provides a detailed printed receipt of the transaction" and can print documents such as flight schedules from the OAG database, a commercial online service, and Exhibit F teaches a terminal with a printer and access to commercial databases. Claim 9 adds nothing to claim 6. Claim 7 remains rejected as lacking written description, but, nevertheless, Exhibits E and F and L&G ISDN console all show a keyboard that controls a computer.

There are at least three reasons why it would have been obvious to add access to the Internet as a pay-for-use feature on Exhibits E and F.

(1) (a)

Exhibit C (see Exhibit C, 4) expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet.

(1) (b)

Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

Because Exhibits D, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to an online service provider. The Internet Navigator and Aliens describe that online service providers were providing access to at least Internet e-mail by 1994, and Aliens describes that the trend among online service providers in 1994 was to provide access to more Internet features than just e-mail. Therefore, Internet Navigator and Aliens would have suggested to one skilled in the art at the time of the invention that the online service providers on the TouchFax terminal provided Internet access via e-mail or, at least, that providing Internet access would have been obvious modification. In addition, Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49) and the application, as originally filed, acknowledges (as it must) that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax kiosk to provide communications services (e.g., online services and Internet access) in a public terminal as those features became common at home and business. Again, since the TouchFax terminal is a pay-for-use-of-services terminal, one skilled in

the art would have been motivated to charge for access to the online service provider which provides Internet access.

(1) (c)

On Haiti discloses charging for use of a public computer terminal to access to the Internet. One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

(2)

On Haiti discloses charging for use of a public computer terminal which provides access to the Internet, but does not describe payment using a credit card, or using a credit card reader swipe device connected to a credit card service center, and does not describe a printer. One skilled in the art of credit card transactions would have been motivated to provide a credit card reader to allow users to charge their credit cards for the convenience of the service provider as well as the user in view of Exhibits E and F and the L&G ISDN console. Connection to a credit card center was so well known that its use is considered to be implied in Exhibits E and F, but, nevertheless, the L&G ISDN console expressly discloses connection to a credit card center for authorization and charging. One of ordinary skill in the art would have been motivated to provide a printer

Appeal No. 2006-0625
Reissue Application 09/134,831

to the computer terminal in On Haiti because printers were used with computers to provide hard copy records of what was viewed, such as e-mails, and the use of printers with public computer terminals was known as evidenced by Exhibits E and F.

CONCLUSION

The rejection of claim 7 under 35 U.S.C. § 112, first paragraph, is sustained.

The rejection of claims 6-9 under 35 U.S.C. § 103(a) is sustained.

New grounds of rejection have been entered as to claim 9 under 35 U.S.C. § 112, fourth paragraph, and as to claims 6-9 under 35 U.S.C. § 103(a).

This decision contains new grounds of rejection pursuant to 37 CFR § 41.50(b) (2005). 37 CFR § 41.50(b) provides that "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:


(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2004).

AFFIRMED - 37 CFR § 41.50 (b)

Lee E. Barrett
LEE E. BARRETT
Administrative Patent Judge


JAMESON LEE
Administrative Patent Judge

Sally C. Medley
SALLY C. MEDLEY
Administrative Patent Judge

BOARD OF PATENT
APPEALS
AND
INTERFERENCES

ATTACHMENTS:

- (1) Rawn Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.)
- (2) The World Wide Web Conferences, 1994-1995 Kiosk Papers, <http://www.visi.com/~keefner/pdfs/twwwc.htm>, pp. 1-3 (of 113) (not prior art).
- (3) Black and white copies of Exhibits C,1 to C, 6, which are copies of frames from TOUCHFAX AMERICA, video tape recorded May 14, 1993.

- (4) TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).
- (5) Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).
- (6) VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).
- (7) Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA).
- (8) Paul Gilster, The Internet Navigator (2d ed., John Wiley & Sons, Inc. 1994), pp. 15-18, 24, 25, 56, 57, 195, 221-225.
- (9) Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. 82-84.
- (10) On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis.
- (11) Statement by Gregory W. Adank received April 24, 2002.
- (12) Declaration of Adolf Deyhle (Exhibit E to Griffes Protest)
- (13) Deposition of Daniel Toughey in Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed March 16, 1998), pp. 1-5, 20-25, and 40-59.
- (14) Background definitions from wikipedia.org (not prior art)

Internet: "http://en.wikipedia.org/wiki/Internet," p. 1/10.
Online service provider: "http://en.wikipedia.org/wiki/Online_service," 2 pages.
Videotex: "http://en.wikipedia.org/wiki/Videotex." 4 pages.

Appeal No. 2006-0625
Reissue Application 09/134,831

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Suggestions for Information Kiosk Systems using the World Wide Web

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The World Wide Web Information Kiosks Special Interest Group

30 April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superceeding other access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Introduction

A Kiosk-based Information system has many requirements to create the most user-friendly interface while maintaining security and functionality. User-friendliness is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

I
Attachment A-

- a multimedia tool is the primary type of program used by information systems because of the combination of text, graphics and sound are more appealing. The many different Web browsers have these capabilities already.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Web Design

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such kiosks.

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as $t = \infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

The following are suggested requirements for an access interface based upon the above suggestions:

- **Physical Requirements**

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

- **User Interface Program**

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

The Server

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintainence. This may be expensive if network connect time charges are expensive.

Functionality

Functionality of the server is key to its success. The more special functions it serves and the greater the extensibility of the server program, the better its chances of success as a popular system.

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently not a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

contain restricted documents but data managers may wish to restrict certain areas of their Webspace dependent upon their own criteria.

Control

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

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PLAY TouchFax 0:00:08
Information Systems, Inc.
TOUCHFAX AMERICA

TIME 1:20
WITH MUSIC

Audio: Mono

Recorded: 5-14-93

VPR Creative 0:00:01:4

EXHIBIT

C-1

berg No. 5119

ADICHE

0:20:19:4

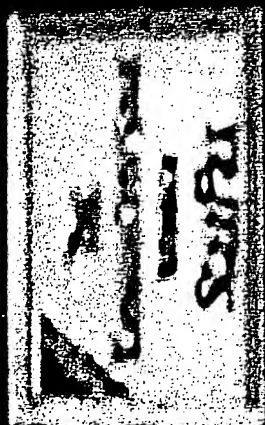
EXHIBIT
C, 2

berg No. 5119

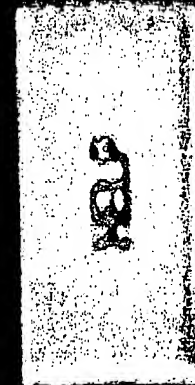
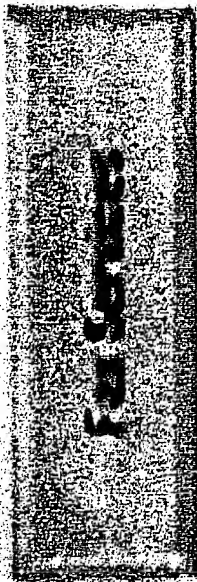


TouchFax
NEO

1 Main Menu



TouchFax



04:00:25:15

EXHIBIT

C, 3

HCI Mail

Internet

040043433

EXHIBIT

C, 4

Sheng No. 6119

EXHIBIT
C, 5

0:00:34:9

berg No. 519



0:01:16:6

EXHIBIT

C, 6

Sheng No. 519

TouchFax

TouchFax Provides The Ultimate In Place-Based Interactivity

By Allen Weiner, Editor

If you think of TouchFax Information Services, Inc., as a company that manufactures public fax machines, you have only part of the picture. In the rapidly growing arena of place-based media, TouchFax is creating products that will allow consumers the same sort of interactive capabilities as they will have with their home-based interactive appliances.

"We believe the information for the machine can be strategically designed for the location type so the type of services and the type of information that can be retrieved interactively on our terminals can be totally different from one machine to another," says John Massey, the machine's creator and chairman of the Lenexa, Kan.-based company.

"We always will have a basic set of common services that are available on all machines," he adds. "But, particular machines will have unique sets of advertisements and promotions on them, as well as related services that relate to the type of people that frequent a particular type of location."

And locations are key to the TouchFax family of products. Massey believes they are best utilized in places where "a number of different types of users can interact with their desired and preferred telecommunications service." Airports, hotels, truck stops, apartment complexes and even supermarkets are ideal for these multi-functional, multimedia machines.

TouchFax hardware products include three models of public terminals used initially as pay-per-use fax machines. They also can provide other services such as word processing and high-quality copies in addition to its primary communications capability of phone, fax and computer. Service products include personal fax mailboxes and information services which may be accessed by TouchFax public terminals and any private fax machines.

The TF Series public terminals are location specific and are designed to meet the space in which they will reside. For example, a lower cost unit designed for lower traffic locations also has a smaller paper storage capacity and would require more frequent service calls if placed in a high traffic location.

All TouchFax terminals use proprietary



Best Available Copy

Attachment C 1

EXHIBIT
E

software to create an easy-to-use visual control panel. This user interface to the machine is displayed on a touch-sensitive color video monitor which provides instructions to the user and on-screen buttons to operate the terminal functions.

Documents to be sent are scanned on a jam-proof flatbed scanning device which operates much like a standard copy machine. Payment for services is made by using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping.

"It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

Best Available Copy

TouchFax's TF750 is a free-standing kiosk with a high-resolution, 14-inch color touchscreen monitor, 386 microprocessor, high-volume laser printer, full-size keyboard and data port for modem and laptop connections. The TF450 is a built-in, wall-mounted unit that has an optional floor mount and offers the data ports for modem and laptop connections on an optional basis. The TF200 is a built-in, wall-mounted unit that offers a laser printer as an upgraded feature.

TouchFax offers two service products which adds to its flexibility—a fax mailbox service and electronic library. The TouchFax Mailbox is a centrally managed electronic service capable of storing fax messages. Mailbox subscribers are given a personal phone number to allow fax messages to be sent to their mailboxes, stored in the mailbox and retrieved at any time. To retrieve stored messages, the subscriber calls his mailbox number, enters a Personal Identification Number, enters the fax destination number and the system forwards the stored fax messages as instructed.

The TouchFax Electronic Library is a collection of information products organized by category. These information products are made available by combining information databases and high-resolution fax printer output with the ease of remote telephone communications. Information products are available on TouchFax public terminals and from any private fax machine.

On a TouchFax public terminal, the touchscreen provides an interactive dialog between the consumer and the information provider. For example, a consumer can select OAG FlightFax to get up-to-the-minute flight information, seat availability and fares. The consumer is guided through a series of video screens requesting their specific flight schedule. The TouchFax public terminal then sends the information via computer modem to OAG's database and a one-page personalized report is delivered to the TouchFax terminal by facsimile.

To access the TouchFax Electronic Library from your home or office requires a touch-tone telephone. A user responds to a series of audio prompts and directs the document to his home or office fax machine. For example, consumers can define the content of an up-to-the-minute special interest newsletter compiled from the news resources of *USA Today*.

Users also can request details of forecasters weather conditions in their destination city, maps and directions to specific locations, as well as city guides with suggestions on where to dine and what to see. Other services are oriented specifically toward entertainment and include popular business book summaries, personalized cartoon fax messages and event schedules.

In essence, TouchFax provides the future interactive appliance user a similar service to what he will be able to access with his Interactive Video Data Service terminal, touchscreen telephone or interactive cable device. So, home or away, the consumer can be interactive.

"The TouchFax is designed to emulate exactly what a person will be able to use in their homes," says Massey. "It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

FREE EVALUATION



Bill Fawcett the producer of the Ricardo Montalban T.V. Infomercial show is now looking for more amazing products for T.V!

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Irvine, California 92718
Fax: (714) 753-7470

READER SERVICE NO. 29

(6)

VISION...

Leaders see the possibilities before they become obvious. The TF700 is designed with the understanding that the information age is just beginning. It incorporates the latest technology into an integrated system that can meet the communications needs of today and tomorrow.

POWER...

Every leader has a great mind. The "mind" of the TF700 is a powerful hardware/software system engineered to provide a comprehensive set of communication functions. TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location. The TF700 has the additional power to access other computer systems and enhanced fax services like our own InfoTouch™ electronic library.

VERSATILITY...

Leaders stay responsive to changing circumstances. The TF700 is a versatile platform that can adapt to take advantage of new technologies and opportunities, while meeting many present needs.

~~~~~Public Fax has arrived.

The TF700 is the most complete solution to the needs of the rapidly growing public fax market. It provides high quality fax, jam-free operation and plain paper output in a convenient, self-service terminal.

-----Information Access is the key.

The TF700's self-instructing touchscreen interface encourages the general public to utilize the many information databases available.

~~~~~Word Processing is a plus.

The full-sized keyboard offers the business traveler the perfect solution to composing and printing a letter or even personalizing a greeting card.

.....Video Advertising works.

The TF700's high-resolution color monitor provides a powerful medium to deliver advertising messages. In addition, each video ad screen can be linked to a printed coupon or sales literature that is instantly printed and delivered at the touch of a button.

TF

THE PUBLIC COMMUNICATIONS TERMINAL
OF TOMORROW... FOR INDUSTRY LEADERS TODAY.

TouchFax

INFORMATION
SYSTEMS, INC.

15520 College Boulevard, Lenexa, Kansas 66219
Phone: (913) 599-6699 (800) 869-TFAX (8329) Fax: (913) 599-5588

Exclusive European Distributor: Landis & Gyr Communications (Switzerland) Corp.
Grand Pré 70, CH-1211 Geneva 16
Tel.: 022 733 55 00 Telefax: 022 733 52 19 Telex: 751 703

Best Available Copy

Exhibit No. 1119

EXHIBIT

F

TF

Public Communications Terminal

The demand for public communication services is growing. Many of the largest telecommunications companies in the world have seen the handwriting on the wall. Several industry leaders have already responded by selecting TouchFax as their product of choice.

In the new TF700, TouchFax has combined precision engineering and powerful functionality to create the industry's most advanced personal communication center. At the touch of a few buttons, the new TF700 can put anyone in touch with the world through an extensive menu of essential services including:

telephone; send or receive a fax; photocopying; word processing; and laser printing; and access to a growing network of information databases from Wall Street news to international sports scores.

Handset and Hookswitch
are AT&T quality, delivering high performance and durability.

External Speaker
gives clear audio feedback of busy signals, fax tones, or voice prompts.

Access Door
provides convenient access to internal components, extra paper and supplies.

Ergonomically Designed Cabinet
with heavy-duty steel construction comes in a variety of finishes. Custom colors are available.



14" Color TouchScreen Monitor
offers unrivaled ease of use and displays information and ads in sharp, brilliant colors.

Credit Card Reader
accepts major credit cards, phone cards, and can be programmed to accept custom cards.

Full-sized Keyboard
extends for computer database access or word processing, and retracts when not in use.

Option Panels
allow addition of floppy disk drive, optical card reader, laptop or modem connections.

300 DPI Flatbed Scanner
delivers high resolution with jam-free, photocopier-like operation.

386 CPU
with 40 megabyte hard drive, proprietary control interface and integrated fax and data/modem capabilities.

300 DPI Laser Printer
offers crisp, high-resolution printing on plain paper and an optional 700 sheet paper tray.

Compact Footprint
of just 24"W X 28"D lets the TF700 fit in almost anywhere.

TouchFax is a registered trademark. © 1991 TouchFax.

Touch

The Leader in Public Communications Systems

Now the information age is for everyone. The TF700 provides a friendly, touchscreen window to a universe of information available from on-line computer and fax information services. Never before has the public had easier access to such a wide range of printed information.

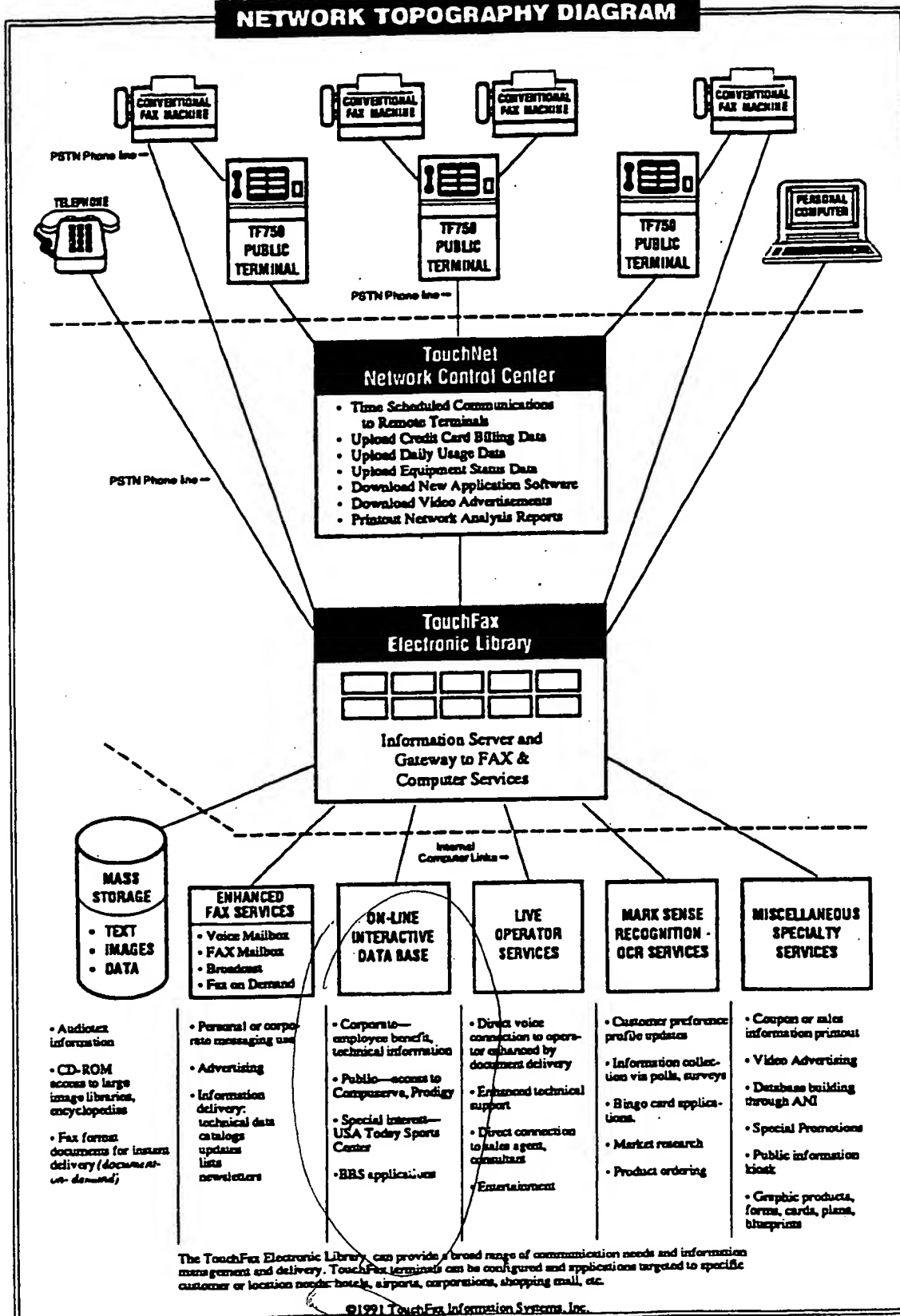
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— Attachment D—

(7)

TouchFax

NETWORK TOPOGRAPHY DIAGRAM



Best Available Copy

ATTACH

Shurberg No. 8118

EXHIBIT

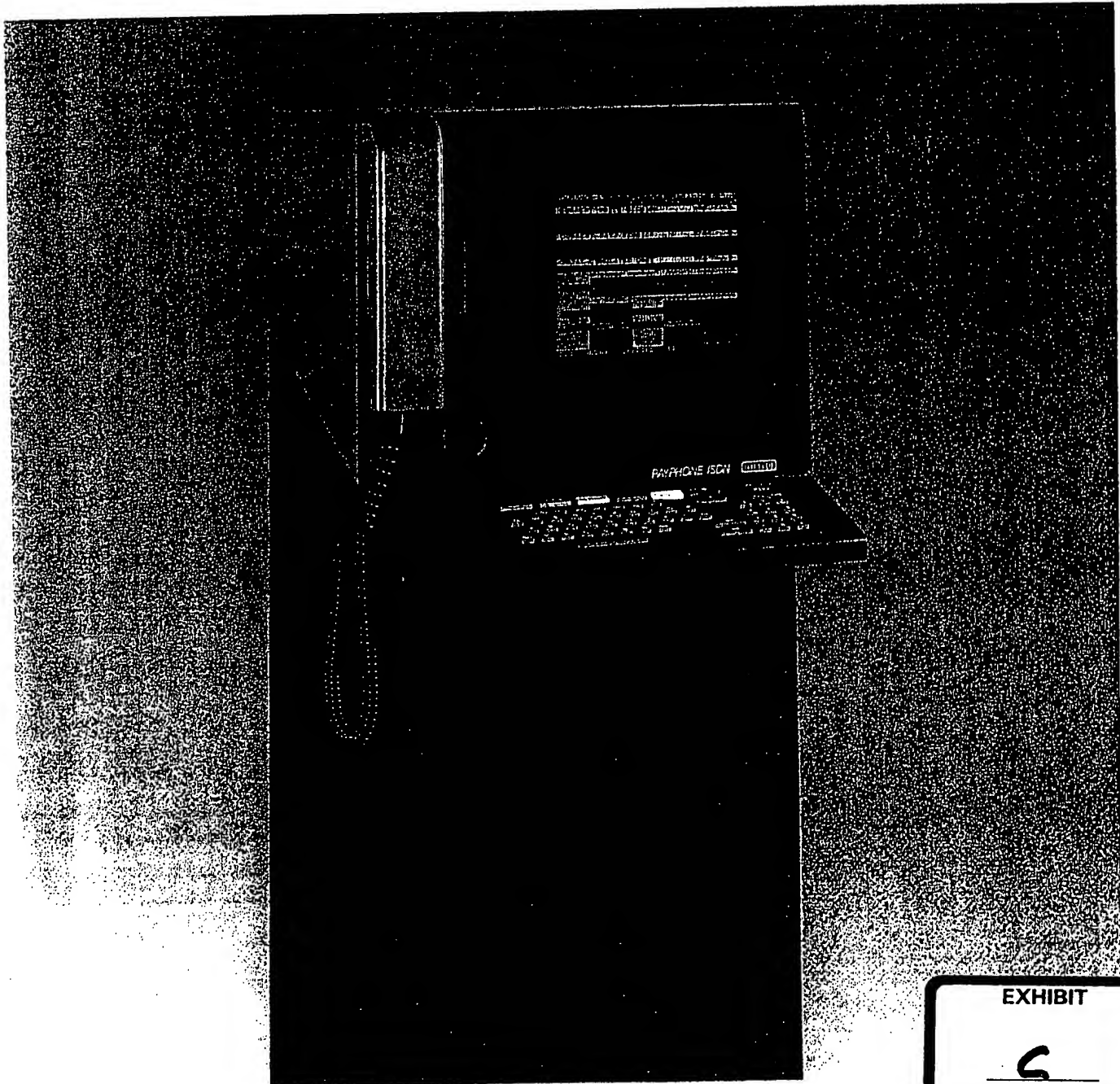
D

- Attachment E

LANDIS & GYR

ISDN console

Public telephone and telematic console

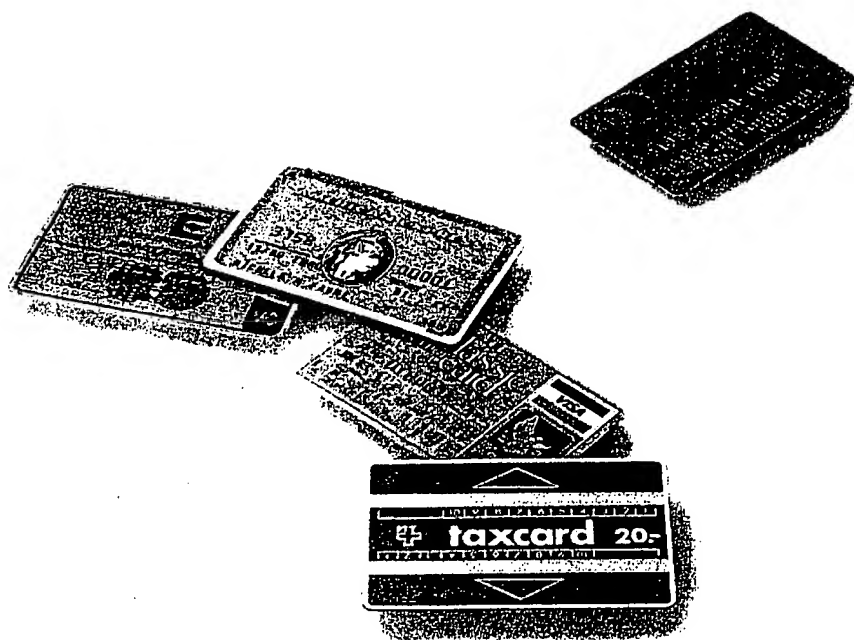


EXHIBIT

6

ALL-STATE® INTERNATIONAL

Attachment F -



- Access to various new services and information sources
- Possibility of accessing a system operator specific data base
- Practical means of payment by means of cards
- Possibility of connecting a portable computer

Motivated by its policy of continuous innovation in telephone equipment, Landis & Gyr presents an advanced public telephone and telematic console, which illustrates the extensive range of services offered and whose role is to promote modern means of communication in crowded public places.

The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal.

Means of payment

Any of the main types of cards currently in use may be employed, namely:

- The Landis & Gyr optically coded pre-paid value card,
- The «smartcard» (card with microprocessor chip) or
- The commercial magnetic credit card

For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.

Multiplicity of services offered

New services are offered to the user:

- Consultation of Videotex type data bases on the colour screen
- Possibility of connecting a portable personal computer to the telematic console by means of a special infra-red connector, thus providing the possibility of accessing specialized data networks.
- Increased help for the user by the display of instructions and menus on the screen, presented interactively and clear identification of the selections by means of special coloured keys.
- Digital telephone, providing a quality that is superior to that of a conventional analogue telephone together with a shorter time for putting the call through.

Videotex

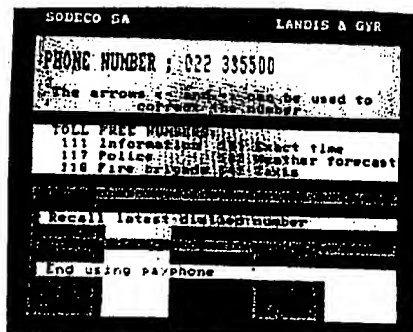
The user has no difficulty in accessing the Videotex services available to the general public (also called Minitel, Prestel and Bildschirmtext, depending on the country).

These services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour.

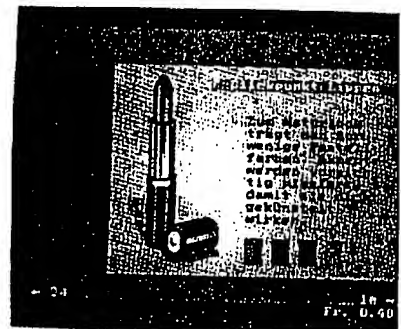
The various services already available include:

- Electronic telephone directory
- Electronic mailbox
- Telex transmission

- Timetables of means of transport
- Reservation of seats with certain airlines
- Reservation of hotel rooms, hire cars, places for cultural and sporting events
- Teleshopping
- Telebanking



Main menu — a colour is attributed to each choice; pressing the key of the same colour on the keyboard causes selection of the desired function



The Videotex standard enables pages with a high degree of graphics to be created.



Data base specific to the system operator

In addition to the Videotex data base, the user also has access to a specific data base, restricted to the users of Landis & Gyr ISDN consoles. This private data base, when it is installed, offers services restricted to a definite geographic region,

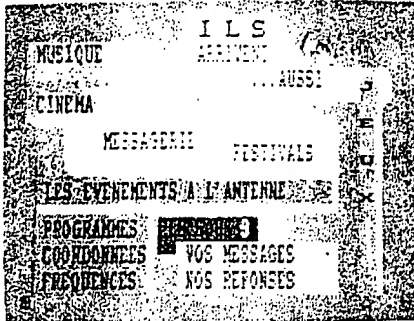
for example: nearest chemists, street directory, proposed route to reach a given address, nearest bus stops, etc.

An easily used source of local information is thus available to travellers and tourists.

Use of a portable personal computer

The Landis & Gyr ISDN console makes it possible to link up to a computer centre from a public place.

The services accessible from a portable personal computer are those that are currently accessible via the specialized data networks, termed packet switching networks or type X.25 networks.



Page for accessing the Videotex server of a local radio station

the system operator at a distance and then loaded via the network. They may include a high proportion of graphics so as to achieve maximum visual impact.

Maintenance

Landis & Gyr has applied the concept of remote maintenance to its ISDN consoles. This concept has already proved its value in the range of conventional telephone stations (BTG Remote Management Systems).

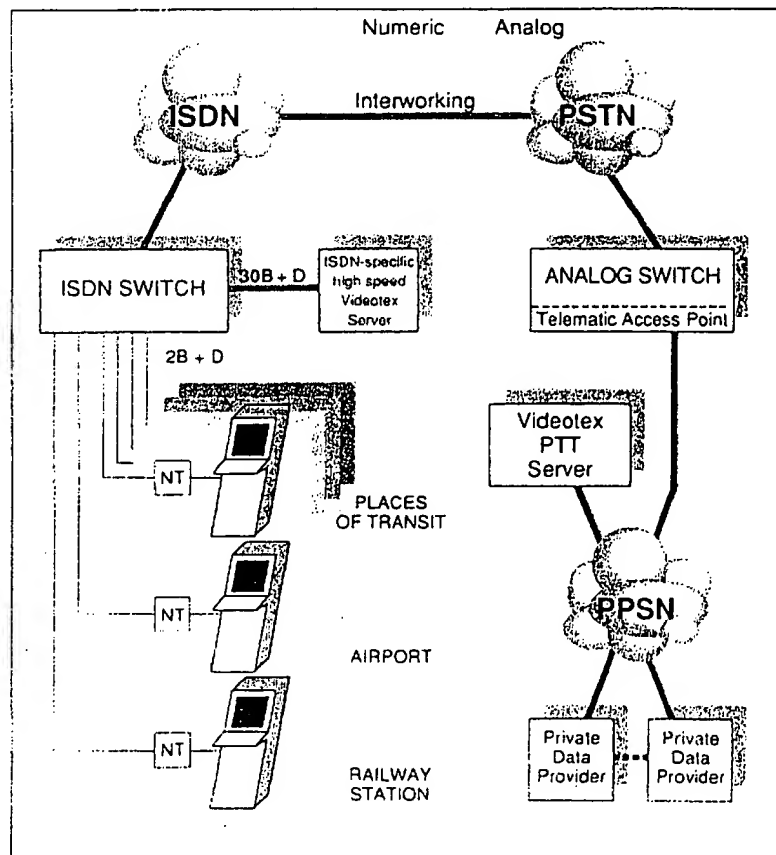
These services may be classified in two categories:

- ❑ Link up to a private central computer and use of the portable terminal as a remote terminal to transfer data or carry out any other operation on the central computer (e. g. transfer of the orders obtained during the day, from the memory of a commercial traveller's portable computer to the central computer of the company).
- ❑ Connection to value-added services available on host computers (e. g. private electronic mailboxes, reference library data banks).

Profitability

The operator of a system of Landis & Gyr ISDN consoles has considerable scope for making the investment profitable within a very short time:

- ❑ He may make a «private» data base service available to the public on a payment basis (value added service).
- ❑ He may also use the screen of the ISDN console for advertising purposes. It should be noted that when the screen of the Landis & Gyr ISDN console is not in use, which is the case in particular if the user is only making a voice communication, the operator may cause pages of advertising matter to scroll past on the screen. These advertising pages are generated by



ISC

Put

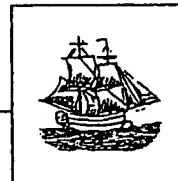


**Technical characteristics of
the Landis & Gyr ISDN console**

- Access to the ISDN S bus, with possibility of use in a multi-point configuration
- Management of communication protocol on ISDN channel D (LAP-D and Layer 3, according to I.441 and I.451)
- During transmission of data on channel B, use of the X.25 protocol (LAP-B, Layer 3 X.25)
- Access to non-ISDN Videotext type information providers, by means of a TA a/b adaptor, installed as an option
- Once the possibility of user data transfer on channel D is provided, this service will be made available, in particular for administration of calls made on credit.
- Access to certain additional ISDN services, such as call back, multi-party conference calls, provided these services are available on the network.
- Multiple means of payment:
Landis & Gyr prepaid value cards
Cards incorporating a microprocessor chip («Smartcards»)
Magnetic commercial credit cards
- Installation on semi-protected public sites
- Overall dimensions: 49×36×130 cm
- 9" colour screen
- Supplied from the mains

Africa	Landis & Gyr, 9 av. Houdaille, 01-BP 8629, Abidjan 01, Côte d'Ivoire, Tel.: 32 63 79, Tx: 22 457, Fax: 326319
Austria	Landis & Gyr GmbH, Breitenfurterstr. 148, Postfach 9, A-1231 Wien, Tel.: 0222/84 26 26, Tx: 132 7 06, Fax: 222/84 26 26 313
Belgium	Landis & Gyr SA/NV, Av. des Anciens Combattants 190, Oud-strijderlaan 190, B-Bruxelles/Brussel, Tel.: 02/244 02 11, Tx: 65 630, Fax: 02/242 88 31
Denmark	Landis & Gyr A/S, Klausdalsprovej 1, DK-2880 Soborg, Tel.: (01) 69 46 00, Tx: 22285, Fax: (01) 69 49 49
Finland	Oy Landis & Gyr AB, SF-02430 Masala, Tel.: 90/29731, Tx: 12 10 39, Fax: 0/297 55 31
France	Landis & Gyr Sàrl, 16 Bd. Général Leclerc, F-92115 Clichy, Tel.: 1/47 56 57 00, Tx: 630893, Fax: 1/47 30 39 50
Germany	Landis & Gyr GmbH, Friesstr. 20-24, Postfach 600529, D-6000 Frankfurt 60, Tel.: 069/40020, Tx: 0417 164, Fax: 69/400 25 90
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Italy	Landis & Gyr SpA, Divisione Commerciale, Via P. Rondini 1, I-20146 Milano, Tel.: 02/42481, Tx: 332 142, Fax: 2/48300773
Netherlands	Landis & Gyr B. V., Kampenringweg 45, Postbus 444, NL-2800 AK Gouda, Tel.: 01820/65 432, Tx: 20 657, Fax: 1820/32 437
Norway	Landis & Gyr A/S, Caspar Stormsvei 16, P. B. 6395 Etterstad, N-0604 Oslo 6, Tel.: 02/65 10 30, Tx: 78 346, Fax: 02/64 81 87
Portugal	Landis & Gyr LDA, Rua Filipe da Mata nr. 66-1, P-1800 Lisboa, Tel.: 01/76 93 82, Tx: 13 696, Fax: 01/764 203
South-East Asia	Landis & Gyr (S.E.A.) PTE LTD., 460 Alexandra Road 22-03, PSA Building, Singapore 0511, Tel.: 273 51 51, Tx: 55 782, Fax: 273 25 25
Spain	Landis & Gyr BC S.A. Batalla del Salado 25, E-28045 Madrid, Tel.: 1/467 19 00, Tx: 22975, Fax: 1/239 44 79
Sweden	Beving Elektronik AB, St. Eriksgatan 113A, Box 21104, S-10031 Stockholm, Tel.: 08/15 17 80, Tx: 10040, Fax: 336 863
Switzerland	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 16, Tel.: 022/733 55 00, Tx: 751 703, Fax: 022/733 52 19
United States	Landis & Gyr, Inc., 8 Skyline Drive, Hawthorne, New York 10532, Tel.: 914/347 26 30, Fax: 914/347 26 41
Other countries	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 16, Tel.: 022/733 55 00, Tx: 751 703, Fax: 022/733 52 19

LANDIS & GYR



THE INTERNET NAVIGATOR

SECOND EDITION

Paul Gilster

SCIENTIFIC & TECHNICAL
INFORMATION CENTER

FEB 25 1997

PATENT & TRADEMARK OFFICE



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- Attachment F -

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The Internet Defined

The Internet is a vast, sprawling network that reaches into computer sites worldwide. By its very nature, this interlinked web of networks defies attempts at quantification. Some sources cite Internet penetration into over one hundred countries, with twenty thousand separate networks feeding into it containing more than 2.5 million host computers and twenty million users.¹ Other sources give higher user figures, citing fifteen million people in the United States and twenty-five million worldwide who have used the Internet.² Indeed, estimates about the Internet's growth are proliferating almost as fast as new host computers on the network.

Consider that by 1985, approximately one hundred networks formed the Internet. By 1989, that number had risen to five hundred. The Network Information Center of the Defense Data Network found 2,218 networks connected as of January 1990. By June 1991, the National Science Foundation Network Information Center pegged it at close to four thousand, and, as we've seen, connections have more than quadrupled since then. If we extrapolate based on current numbers, the Internet could reach forty million people by 1995, one hundred million by 1998. Its current growth rate is 100 percent yearly.

Couple that information with an estimated 120–150 million personal computers in use worldwide and you've created a situation with dramatic possibilities. Few of the desktop computers in the average home, for example, are networked together. But many home and business computer users would like to access the Internet's rich resources. The solution: a modem and a dial-up account.

Until recently, it was difficult to access the Internet on a dial-up basis, but the increase in Internet service providers has improved that situation. In the past year and a half, estimates John Eldredge of Performance Systems International, a major service provider in Reston, VA, the number of individuals connecting to the Internet by dial-up has increased from 50 to 80 percent.³ And

commercial providers such as CompuServe, GENie, and Prodigy have all made Internet mail access available. DELPHI and BIX have full Internet connections with access to all major services. Demand is intense. "We've seen an incredible response to our offering of full Internet services," says DELPHI general manager Rusty Williams. "It's been well received by current members and by other people looking for Internet service options—people in business, students, researchers, families."⁴ UNIX-based service providers tell much the same story of growth in the individual user market.

A BRIEF HISTORY OF THE INTERNET

The Internet's beginnings gave no hint that it would evolve into a publicly accessible network. Like many other great ideas, the "network of networks" grew out of a project that began with far different intent: a network called ARPANET, designed and developed in 1969 by Bolt, Beranek, and Newman under contract to the Advanced Research Projects Agency of the U.S. Department of Defense (ARPA).

The ARPANET was a network connecting university, military, and defense contractors; it was established to aid researchers in the process of sharing information, and not coincidentally to study how communications could be maintained in the event of nuclear attack. From humble beginnings—the ARPANET's founders originally contemplated letting only researchers log on and run programs on remote computers—the network grew. They soon added file transfer capabilities, electronic mail, and mailing lists to keep people interested in common subjects in communication.

But even as the ARPANET grew, other networks were under development, and it became clear that new methods of communicating would be necessary. As early as 1973, in an era of mainframe computing a decade before the desktop PC revolution took hold, ARPA, under its new acronym DARPA (Defense Advanced Project Agency)⁵ began a program called the Internetting Project. The goal was to determine how to link networks. Central to this concept of "internetting" is the need to overcome the different methods each network uses to move its information. When properly implemented, so-called *gateways* can be used to connect networks, passing traffic seamlessly from one to the other.

Finding the Right Protocol

Making internetwork links work requires the right protocol. In computer parlance, a *protocol* is simply a set of conventions that determines how data will be exchanged between different programs. Protocols specify how a network is to move messages and handle errors; using them allows the creation of standards separate from a particular hardware system. DECnet, for example, is a protocol used by networks running Digital Equipment Corporation computers; Novell, a familiar name in office networking, is another example of a protocol standard that allows computers to work together. Everything from the speed of the communicated data to the addressing schemes used to move individual message traffic is factored in the protocols used by a given network.

The Internet uses a protocol called *TCP/IP*, which stands for *Transmission Control Protocol/Internet Protocol*. IP is responsible for network addressing, while TCP ensures that messages are delivered to the correct location. These

powerful protocols were developed in 1974 by Robert Kahn, a major figure in ARPANET development, and now president of the Corporation for National Research Initiatives (CNRI), and computer scientist Vinton G. Cerf, now president of the Internet Society and vice-president of CNRI. Their pioneering work created the mechanisms by which the Internet could appear. In fact, if we are looking for a quick definition of the Internet, we can simply say that it is a network of networks that run the TCP/IP protocol suite.

If you will fall into the habit of thinking of the Internet as a metanetwork—a network made up of interconnecting networks—you will grasp the dispersed, decentralized nature of this enterprise. Around the world, connecting through special computers called *routers* and *hubs*, computers from different manufacturers running a whole range of operating systems can communicate with each other. Digital Equipment Corporation minicomputers can talk to Sun Microsystems workstations. Standalone PCs and Macintoshes can talk to Intel machines on office networks; they, in turn, can reach large-scale regional networks, which connect their high-speed circuits over a grid called a *backbone*.

You should realize that TCP/IP is not the only protocol for connecting a variety of different networks. The Internet is actually becoming a multiprotocol network, integrating other standards into its operations. Chief among these is *Open Systems Interconnection*, or *OSI*. Developed by the International Organization for Standardization (ISO), OSI has been widely embraced in Europe, where the momentum of TCP/IP has been less overwhelming than in the United States. Systems using other protocols likewise connect through gateways to the Internet; BITNET, for example, is a network that communicates using its own standards, but which is at least partially accessible to the Internet through such linkages. And the UNIX-to-UNIX Copy Program (UUCP) network connects thousands of computers by dial-up telephone lines; its electronic mail destinations are likewise available to the Internet user.

THE INTERNET VS. COMMERCIAL ONLINE SERVICES

Commercial on-line services like GENIE and DELPHI take an entirely different approach to distributing information. If you have been a user of one or more of these systems and now want to dial into the Internet, you must master the differences between the two models. CompuServe, for example, manages its huge user base through a centralized set of computers. When you call into local telephone numbers around the world to gain access to the system, you are connecting ultimately to a centralized set of resources. More telling is the fact that the commercial operation is managed from the top as a business. There is a company behind CompuServe, just as there is behind BIX and DELPHI.

Not so with the Internet, which has grown up free of both the advantages and problems caused by management from the top. This is why, when you connect to the Internet, you must choose from among a wide range of service options (we examine these in the next chapter). No central sign-up facility exists for the Internet; rather, you make contact with a service provider who allows you to gain access to the network through local computers. The consequences of this decentralization on network resources are likewise strong. What you find on the Internet depends on the decisions of thousands of system administrators around the world. No single company has made an

overall decision about network design, which makes mastering the search tools we will examine later a critical part of your explorations.

What Is Packet Switching?

Consider the great problem of networking diverse computer systems. You would like to move a stream of data from one computer across a communications link to others. How does the data get there, and how can we ensure that when it does so, it arrives in precisely the condition it was when it left? Can we be sure that our addressing scheme works, and that, in the event of a network failure, our data will be rerouted so that it reaches its destination? These are problems that network protocols must address. The Internet uses a scheme called *packet switching* to solve them.

Packet switching takes data and breaks it into parts, giving each segment a header with the necessary routing information. Computers on the network examine these headers and move the data packet along to the next site. Each time, the packet gets closer to its destination. A major bonus of packet switching is that the computers routing this data can select alternate routes when a given link fails (remember, this system was developed by researchers who were considering how to ensure reliable communications when parts of the network were destroyed in a nuclear conflagration). Another bonus: The computers at either end of a packet network connection can operate at different speeds; the network itself acts as a buffer to adjust for the difference.

You may also have run across the term *circuit switching*. Think of one-to-one contact here. If you set up a data session between two computers using ordinary telephone lines, placing a call whenever you need to move data, you would be using circuit switching. The method is useful when you need to connect computers to transfer large amounts of information. But because it requires you to set up a circuit dedicated to an exclusive use each time you use it, circuit switching is unable to handle the massive amounts of diverse data carried by the Internet. Complex applications requiring contact with multiple computers must rely on the packet switching model.

The Internet Emerges

In 1993, the U.S. Defense Communications Agency mandated TCP/IP for all ARPANET hosts. In doing so, it established a standard by which the Internet could grow. From this point forward, it would be possible to add more gateways, connecting more networks, while the original core networks remained intact. Most people date the true arrival of the Internet at 1983, the year when the original ARPANET was split into MILNET—to be used for military communications—and the ARPANET—for continuing research into networking. But, as early as 1980,⁶ CSNET, a network linking computer science departments in several states, became the first autonomous network DARPA allowed to connect to the ARPANET.

CSNET eventually merged with BITNET in 1989. The ARPANET itself was decommissioned in June 1990, its functions absorbed into the broader structure of the Internet. But the two networks had established a workable principle: let networks communicate by a set of protocols, with new networks being added to an ever-growing metanetwork communicating through gateways. That principle

depths of the world's fastest supercomputers to 1200 bps dial-up modems moving electronic mail traffic into some of the world's poorest countries. Clearly, a directory of all its constituent networks would be a massive volume which would quickly pass out of date. Users interested in tracking down network structure will, however, be interested in Tracy L. LaQuey's *The User's Directory of Computer Networks* (Digital Press, 1990) as well as John S. Quarterman's *The Matrix* (Digital Press, 1990); both are excellent starting points. And anyone seriously attempting to monitor network growth will learn that an active on-line presence is critical.

The Big Three Internet Applications

As Douglas Comer points out in his *Internetworking with TCP/IP. Vol 1: Principles, Protocols, and Architecture*, what you as an end user see of the TCP/IP protocols is a set of application programs that enable you to use the network to good advantage.¹² You and I don't need to know the intricacies of how TCP/IP functions, though if you're curious, there's no better or more respected guide than Comer's work. But running the programs themselves is not difficult, as we'll see.

Users of dial-up computer services, like users of bulletin board systems (BBS) and commercial on-line services, have come to expect certain capabilities from their providers, which the Internet provides in its own way through TCP/IP.

Here is how the Internet delivers these basic functions.

ELECTRONIC MAIL

Electronic mail is the most elementary service, and for many users, the most useful. Many people on the Internet have used nothing but electronic mail and still find the network indispensable. You can send messages to one or more people, deliver text files, retrieve information by automated computer programs like LISTSERV (through a gateway to BITNET), and more. While access to all three of the major Internet services is vastly preferable, it's possible to do quite a lot with electronic mail alone. A good thing, too, for aside from DELPHI and BIX, the only major on-line services with a full-fledged Internet connection, there is only limited access to the Internet from the other commercial services. That means, as we'll see in Chapter 3, you have three choices:

1. Learn to use the Internet through mail alone (Chapter 8 shows you how much you can do with such a connection).
2. Use DELPHI or BIX's full-service connection.
3. Get an account with one of the full-service dial-up providers discussed in Chapter 3 (more on these options there).

Ironically, in the early days of the ARPANET, electronic mail was considered an insignificant add-in to network capabilities. No one anticipated the high volume of traffic that began to flow as scientists exchanged ideas with geographically distant colleagues. Today electronic mail is taken for granted, from small companies with office networks to giant corporations linking remote offices worldwide. Its growth has been just as strong on the commercial networks, many of whose members maintain accounts solely for the e-mail connectivity they provide.

FILE TRANSFER

Moving files between computers is one of the handiest features of the networking revolution. If you can find something you can use—and if it's made publicly available, as are thousands of computer files on the Internet—you can transfer it to your computer. The process is called *file transfer protocol*, or FTP. You access documents made available to the public through a procedure called *anonymous FTP*. This procedure allows you to log on to remote computers and use the resources in directories the administrators have made available to the public. Anonymous FTP will be a major tool as we retrieve files and build an Internet library later in this book.

With FTP procedures, the Internet gets challenging indeed. Instead of consulting a single library source, as on CompuServe or GENIE, for a catalog of files, you are faced with thousands of computer sites offering programs and text files. To track down the program you need easily, you should learn about the access tools we'll discuss later. With them, you can locate programs, then use FTP to move them from the source computer to your service provider's computer at high speed, and subsequently download them to your own machine.

REMOTE LOGIN

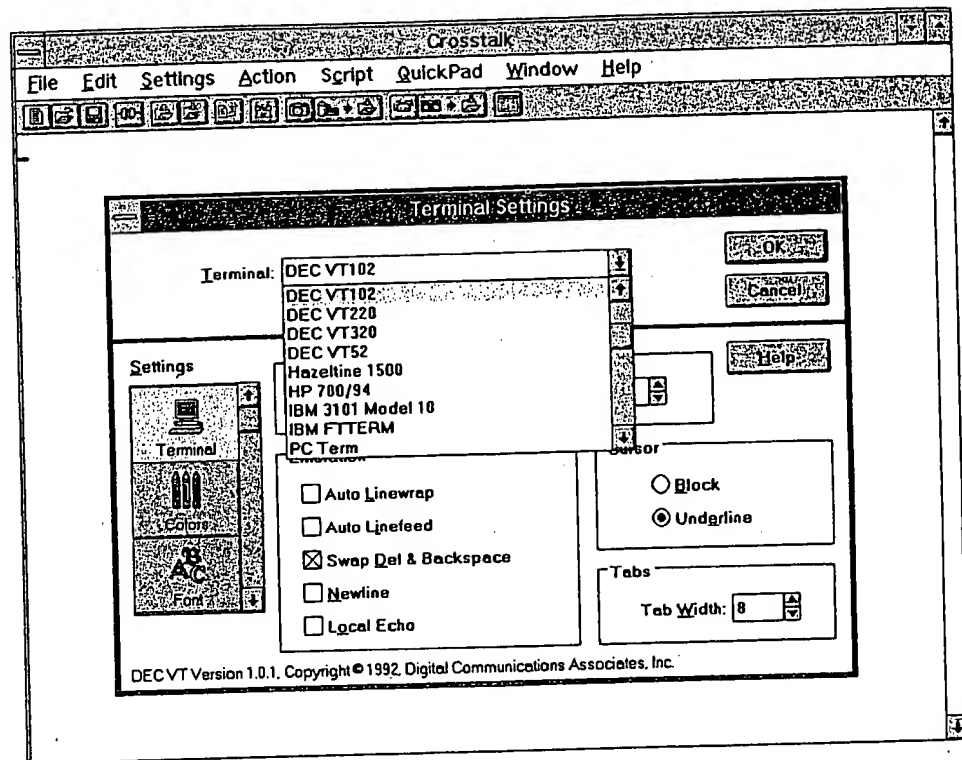
Remote login, otherwise known as Telnet, provides the ability to connect to a remote computer and work with it on an interactive basis. Again, the Internet opens the doors to a worldwide computing environment, on many of whose connected machines are services, databases, and other resources that can be examined and manipulated. By using Telnet, you can log onto the library catalogs of distant universities, look for information about everything from the formation of distant galaxies to recipes for potato soup, and examine Supreme Court decisions or the lyrics of popular songs. All the while, your computer will act as a terminal of the remote computer, which will respond to your command. In many cases, menu-driven systems at the other end make interactive sessions intuitive, but some systems are considerably easier to work with than others.

Note that when the network called "the Internet" is referred to in print, it always has a capital I. But you may also see abundant references, if you prowl your bookseller's shelves for computer books or read the computer press, to general terms such as "internets," "internetting," and "internetworking." Remember that TCP/IP can pass information among computers that aren't on *the* Internet. Your company, for example, might have local area networks in a number of sites. At some point, it would make sense for management to link those LANs together. One way of linking them is through TCP/IP. Your company would have established an *internet*, but you're not on *the Internet* unless you decide to be.

Public Packet Switching Networks

We have already discussed packet switching, and how it breaks messages into segments, each of which contains the necessary addressing information to ensure safe delivery. The ARPANET was the first major packet-switched network, running on an experimental basis for the use of DARPA contractors and not open to the general public. But as a dial-up modem user, you have probably encountered another form of packet switching, as used by networks like BT Tymnet or SprintNet. These public networks allow you to contact distant computers with a local telephone call; they then route your computer traffic to the appropriate destination.

Figure 3.1
Crosstalk for
Windows, terminal
emulation choices
from the Settings menu.



SIGNING ON—A PERSONAL ODYSSEY

Commercial access to the Internet has improved so dramatically in the past two years that newcomers will be startled to learn that there was a time when the process was excruciating, although many early treatments of the subject made it sound like a snap. "Need access? Just ask your system administrator," they blithely said, assuming you wouldn't ask if you weren't already working on a network in the first place. And indeed, if you were already on a network, the advice was sound. Many people to this day don't realize they can connect through their work site and that, in such cases, a simple request is usually enough to get them up and running.

But it was a different story for anyone who was trying to log on by modem from a standalone computer. For me, logging on to the Internet became something of a crusade, deepening into obsession as I continued to run into a stone wall. Several years ago, I made the mistake of asking this question: "I work out of a home office. I don't have Internet access and I don't have a system administrator. What do I do?" I asked people in my area and looked for answers on various on-line services. I peppered local bulletin boards for advice and called computer gurus in Research Triangle Park, pestering some poor souls for months.

The result? "Try the universities," some said. I called Duke, UNC, North Carolina State; access there was restricted and no one I spoke with knew how to get it. Maybe if I was a student. Unfortunately, my years at UNC had ended in the mid-1970s. "Call some of the big corporations," I was told. "Someone out there might be able to get you an account." I didn't know what I was doing, but

I began to make these calls. Most people didn't know what I was talking about. Those who did seemed incredulous that I would ask. "Network connections are private," they said.

Network connections private? If that doesn't give you something to think about, what does?

The Internet is not CompuServe or Prodigy. Lacking any central organization, the network has no billing address. You can't make a phone call to a network office and say, "Sign me up." You'll also get confused by the plethora of possibilities some of the people who are already on the network will tell you about. "Do you want a full connection?" they'll ask, and you reply, "Sure," not understanding why you would want anything else. "The best we can do is SLIP," you may hear. SLIP? What does it mean? And why do these people I'm talking to have nothing better to offer? Is SLIP some kind of restricted access?

It wouldn't be until CONCERT-CONNECT came along that I made my real plunge into the Internet. CONCERT-CONNECT was a service provider which, among other options, made possible local dial-up access to the Internet. It brought order into the North Carolina Internet scene by offering a flat rate per month, allowing you to log on to the computers at MCNC (formerly the Microelectronics Center of North Carolina, now known solely by its acronym, as are many computer organizations). The flat rate was attractive, as were the services; not just USENET newsgroups, but FTP and Telnet as well; not just electronic mail, but the whole panoply of features that make the Internet so fascinating.

Today, CONCERT-CONNECT is gone. In its place are a growing number of Internet service providers, each offering dial-up access. Many also offer more advanced forms of network connection, including the aforementioned SLIP (which we'll discuss in this chapter), and other forms of direct links all the way up to high-speed dedicated T1 and T3 lines. My new service provider is Interpath, a division of Capitol Broadcasting Corp., here in Raleigh. Interpath is representative of the new breed of service provider, offering network connections to a great variety of customers from individual home users to the largest businesses.

What a change. In every state, service providers are springing up; indeed, Internet access is becoming a growth industry, bidding fair to create a price war that will be followed by an inevitable period of consolidation. For you, the individual or small business user, the good news is that prices are dropping across the board. CONCERT-CONNECT once charged \$175 per month for SLIP access; Interpath is now offering comparable service for \$37.50, and regular dial-up access is cheaper still. If it's a full-service access provider you're looking for, finding one will keep getting easier. No provider in your area? There will be soon.

Even more options are appearing from the ranks of the commercial on-line services like CompuServe and DELPHI. In fact, all of the major on-line services now offer some form of Internet connectivity, even if only a gateway that allows you to send and receive mail to and from the Internet. DELPHI and BIX have moved aggressively to open full-access provisions. America Online is beginning to widen its existing mail-only gateway with a host of new services including USENET newsgroups and access to the superb Internet interface and display tool called **Gopher**. Watch for announcements from the other commercial services; Internet access is now the hottest ticket in town as the networks grow together into a true global matrix.

We will work our way up the access ladder to show you what options are available. If you are already on the Internet, you won't need to read the following



Electronic Mail as a Gateway to the Internet

File Transfer Protocol and electronic mail are both key components of Internet connectivity, but what do you do if you only have an Internet mail connection? After all, with the exception of DELPHI, BIX, and America Online, the major commercial on-line services offer only mail connectivity. Fortunately, your on-line mailbox with a commercial provider like CompuServe or GEnie can become a true gateway into the Internet. You won't be able to accomplish everything—in particular, Telnet simply can't be managed by mail alone—but if you are looking for files, you'll be pleased to know you can use electronic mail to retrieve them, without needing to employ FTP procedures yourself.

This chapter is devoted to people with accounts on the CompuServes and GENies of this world. Let's be clear on this: The optimum connection for a dial-up user is a full-access account with an Internet service provider, because it gives you the ability to use all three key Internet protocols—e-mail, FTP, and Telnet. But maybe you're hoping to shop around on the Internet first, to see what's available. Or perhaps you use CompuServe daily and would like to streamline your operations, running everything through your account there. Whatever the case, if you need to transfer files by mail, you can do it. The solution is workable, and while it's not exactly elegant, it does what you want it to do.



What You Need: A Background Document on Internet Faxing.

The Document: FAQ: How Can I Send a Fax from the Internet?

How to Get It: The document is posted regularly on the USENET news-groups `alt.internet.services`, `alt.online-service`, `alt.bbs.internet`, `alt.answers`, and `news.answers`. You can also receive new editions automatically by sending mail to this address: `savetz@rahul.net`, asking to be added to the distribution list.

FINGER BY MAIL

finger is a program we discuss in Chapter 14 which allows you to retrieve information about users and, in some cases, about a wide variety of information such as earthquake updates or popular music. Normally, **finger** is run as a program on your UNIX service provider's computer. However, you can also use electronic mail to send and retrieve the results of **finger** queries. To do so, send e-mail to:

`b.liddicott@ic.ac.uk`

In the **Subject:** field, put this command: `#finger user@site` where `user@site` is the address you want to reach. You will find a list of potential **finger** sites in Chapter 15's directory.

Suppose, for example, that you want to retrieve NASA headline news. The address is `nasanews@space.mit.edu`. Your e-mail request would then read:

```
#finger nasanews@space.mit.edu
```

placed in the **Subject:** field of the message. Sending this, you will shortly receive an update on NASA press releases.

SENDING ELECTRONIC MAIL TO OTHER NETWORKS

If you have any doubts that Internet electronic mail opens out to networks across the world, consider the evidence of John J. Chew's *The Inter-Network Mail Guide*, available on the Internet both as a posting in various USENET newsgroups and also by download with anonymous FTP. Chew tracks the ways in which the various commercial providers maintain links to and from the Internet, and his list is growing with each new posting. A glance through it reveals linkages to such varied providers as Geonet Mailbox Systems, BIX, GreenNet, KeyLink, PeaceNet, SprintMail, and AppleLink, to name literally but a few. Chew's list will come in handy, and I advise you to get a copy.

Now you will learn how to send mail from the Internet to addresses at the major on-line services.



What You Need: A List of Network Interconnections

The Document: **Inter-Network Mail Guide**, by John Chew

How to Get It: Through anonymous FTP to **ftp.msstate.edu**. The directory is **pub/docs**. The file name is **internetwork-mail-guide**. You can also keep up with changes to this document by monitoring the USENET newsgroups **comp.mail.misc** and **news.newusers.questions**.

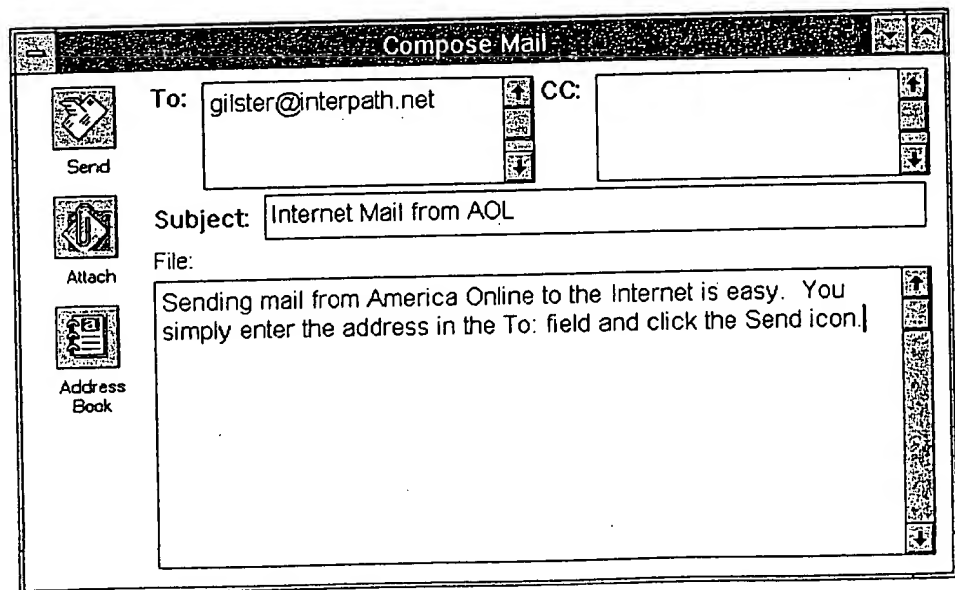
America Online

To send mail from the Internet to America Online, the syntax is **username@aol.com**. The user name should be all lowercase, with spaces removed.

Outgoing messages cannot be any longer than 32k. On the PC version of America Online, incoming mail cannot be any longer than 8k, which effectively prevents your using this service for **ftpmail** file transfers. On the Mac version of America Online, as well as the Apple II version and PC-Link, incoming mail cannot be any longer than 27k. All characters except newline and printable ASCII characters are mapped to spaces. Users are limited to seventy-five pieces of Internet mail in their mailbox at a time.

To send mail from America Online to the Internet, simply enter the Internet address and write your message. Figure 8.19 shows the process in action.

Figure 8.19
Sending a message to
the Internet from
America Online.



BIX

To send mail from the Internet to BIX, the syntax is *username@bix.com*. To send mail from BIX to the Internet, enter the Internet address preceded by *to* at the **Mail:** prompt. The following is an example of a message being sent from BIX to the Internet:

```
Mail:to gilster@interpath.net
Enter subject: Mailing from BIX
Enter text. End with '. <CL>
```

This message is to test BIX's connections to Internet e-mail.

```
send/action:send
Sending..Memo 76679 sent
```

There are no size restrictions on BIX messages to and from the Internet, and no monthly or per-message fee for Internet mail. You can move up to 10MB per calendar month (in both directions, to and from the Internet), without any additional charges. Beyond that, the charge is \$1.00 per 100k transferred. Messages can be up to 0.5MB in length in either direction; longer messages may be truncated.

CompuServe

To send mail from the Internet to CompuServe, the syntax is *usernumber@compuserve.com*. CompuServe user numbers contain commas, which must be changed to periods when you send from the Internet. Thus 12345,6789 becomes 12345.6789. To send me a CompuServe message, for example, you'd send to 73537.656@compuserve.com.

To send mail from CompuServe to the Internet, as just shown, lead off the address with **>INTERNET:** Sending a message to **ftpmail**, then, requires the address:

```
>INTERNET:ftpmail@decwrl.dec.com
```

DELPHI

To send mail from the Internet to DELPHI, the syntax is: *username@delphi.com*. To send mail from DELPHI to the Internet, use the word **internet** followed by the recipient's name (with no spaces in between) enclosed in quotes. On DELPHI, to send a message to **ftpmail**, for example, you would address it to **internet"ftpmail@decwrl.dec.com"**. The following is a sample message from Delphi to the Internet:

```
MAIL send
To:      internet"gilster@interpath.net"
Subj:    Test Message
Enter your message below. Press CTRL/Z when complete, or CTRL/C to quit:
Checking the DELPHI connection to the Internet.
^Z
```

GEnie

To send mail from the Internet to GEnie, the syntax is **username@genie.geis.com**. To send mail from GEnie to the Internet: After entering the Internet address, you are prompted for additional GEnie addresses, copies, and a subject line. You can then enter your text. Figure 8.20 shows a GEnie message to an address on the Internet as it is being composed. GEnie's Internet mail services cost \$3.00 per hour.

MCI Mail

To send mail from the Internet to MCI Mail, the syntax is: **username@mcimail.com**. MCI user names should have spaces removed. Thus **Sam Spade** becomes **Sam_Spade@mcimail.com**. Conversely, it's possible to use an MCI user number. If Sam's number is 123-4567, simply remove the dash. Thus **1234567@mcimail.com**. If there happens to be more than one Sam Spade in the MCI directory, you can reach the desired party by sending to:²

Sam_Spade/1234567@mcimail.com

To send mail from MCI Mail to the Internet, use the EMS option. Here's how to do it:

- At the TO prompt, type recipient's name and the word EMS in parentheses.
- At the EMS prompt, type **INTERNET**.
- At the MBX prompt, type the recipient's Internet address. Note: If the Internet address exceeds eighty characters in length, you must split the

Figure 8.20
Sending a message to
the Internet from
GEnie.

Enter Destination GEnie Address or C/R to continue.

?

Would you like to receive a copy of the message? (y/n) ?n

Enter the subject of your Internet message (max 30 characters) or C/R for no subject:
<----->

Mailing from GEnie

When you see the prompt, 1>, enter your message.
When you have finished entering your text, use the *S.
to send the Internet message. Use *X to exit without sending.

Enter Internet text:

Queue#	Item	From	Length	Sent	Subject
1	6239343	GENIE.MQMT	268	93/05/27	New Pricing Effective July 1st

1>GEnie prompts the user through the mail process, so sending mail to
2>the Internet is relatively simple. You will be prompted for additional
3>addresses for your message, asked if you'd like a copy of it, and given
4>space to enter a subject line.

address into multiple MBX lines. The split should occur at one of the following characters: @ ! %.

- Only one Internet mailbox may be used with an individual TO or CC recipient.
- Complete the mailing procedure as usual.

Figure 8.21 shows an example of sending a message to an Internet address from MCI Mail.

Prodigy

Prodigy is the huge commercial service created by IBM and Sears. To send mail from Prodigy to the Internet, you will need a program called Mail Manager. Jump to *About Mail Manager* while on-line to learn how to download it.

To send mail from the Internet to Prodigy, use the Prodigy user ID followed by the domain name. Thus, to send mail to **klbc98x**, you should address the message to **klbc98x@prodigy.com**.

MAILING LISTS AND ELECTRONIC JOURNALS

A huge variety of mailing lists is available to people with electronic mail access to the Internet. So much is available here that it would make little sense

Figure 8.21
Sending a message to
the Internet from MCI
Mail.

```

EMS:      INTERNET
      EMS  376-5414 INTERNET                NRI                Reston

Enter recipient's mailbox information.

MBX:      mike_banks@bix.com

If additional mailbox lines are not needed press RETURN.

MBX:

TO:        Mike Banks
           EMS: INTERNET / MCI ID: 376-5414
           MBX: mike_banks@bix.com

Is this address correct (Yes or No)? y

CC:

Subject: MCI Mail Check

Text: (Enter text or transmit file. Type / on a line by itself to end.)

Mike:

Please let me know if this message gets through OK.  It's routed to
your BIX account via MCI Mail.

Thanks!

Paul

```

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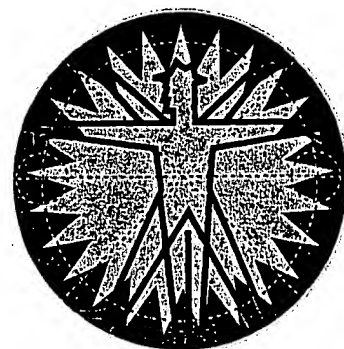
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Departments

LETTERS TO THE EDITOR	4
FROM THE EDITOR by Michael Neubarth	6
INTERNET NEWS	10
INTERNET BOOKSHELF Edited by David Dean	104
POINTERS	106
INTERNET FORUM	108
INDEX TO ADVERTISERS	112



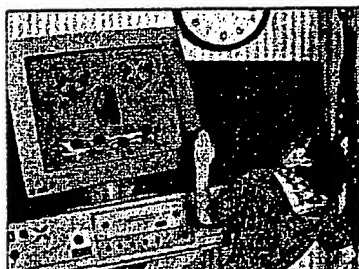
76

contents

99



50



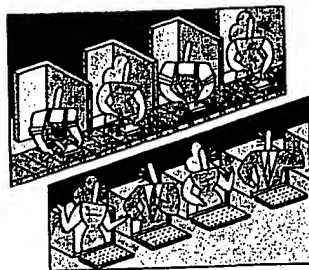
86

Columns

THE SURFBOARD by Andrew Kantor and Eric Berfin	14
NET PROFITS: Power Rap by Christopher Locke	18
INFO HOUND: Herbs, Ella, and IRC by Dave Taylor	22
ENTRY LEVEL: Learning the Ropes: A Usenet Style Guide by Andrew Kantor	24
DIVING INTO THE INTERNET: Internet: Going South by Joel Snyder	94
FOUND IT ON THE NET: Work or Play? by Linda J. Engelman	96
THE INTERNET CURMUDGEON: Painting the Right Picture by Daniel P. Dem	99
ARTIST AT LARGE: Going Graphical (There's No Place Like Home Page) by Kenny Greenberg	102



64



18

Features

USENET: Past, Present, and Future by Dave Taylor	26
SECRETS FROM WITHIN USENET by Kevin Savetz	31
NEWSREADERS: An "n" User's Guide by Robert Sanchez	34
NEWSGROUP CULTURE by Robert Sanchez	38
DOUSING FLAMES by Kristina Harris	42
VIRTUAL ENCOUNTERS by Thomas Barrett & Carol Wallace	45
THE EX FACTOR by Brad Stone	50
GABFEST—INTERNET RELAY CHAT by Aaron Weiss	58
ALL THE NETNEWS THAT FITS Interview with Brad Templeton of ClariNet by Jeff Ubois	64
SERVING ADS by Joseph Raben	70
ANATOMY OF LISTSERV by Karl Signell	76
DIGITAL RIGHTS by Jean Erhard	78
ALIENS AMONG US by Andrew Kantor	82
WHY TEACHERS FEAR THE INTERNET by Crawford Kilian	86
SUPERNATURAL, STRANGE, AND SINISTER by David R. Noack	88

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Aliens Among Us

A horde of new users from America Online, CompuServe, GENie, and Prodigy is coming onto the Internet.

By Andrew Kantor

If you listen carefully, you can hear the grinding of gears and the creak of metal. The big guns of the on-line world—America Online, CompuServe, GENie, and Prodigy—are slowly turning and taking aim at the Internet, and cyberspace will never be the same.

For users of these services, the next few years will see the opening of a doorway (gateway, rather) to a vast and almost uncharted resource. For veterans of the Net, it means an influx of new users (often referred to in a less-than-friendly tone as "clueless newbies") that puts the college September Rush to shame.

There has already been a test case: a virtual sacrifice to the gods of the Net, if you will. America Online (AOL) expanded its Internet services in March 1994, making Usenet Newsgroups accessible to its users. But those users quickly learned the hard way that the Internet did not have an enforced Terms of Service to keep users friendly. They were faced with a barrage of verbal attacks. Their crime? Simply not knowing where to post their messages. But on the Internet, ignorance is never an excuse, and there is no friendly sysop only an instant message away.

Of course, from the Internet users' point of view, thousands of postings from aol.com were suddenly invading the Usenet, often in inappropriate newsgroups. ("Someone searching for family in Oregon should know enough not to post in alt.best.of.internet," says one Usenet veteran.)

America Online learned some valuable lessons that the other services should take to heart before taking the

leap beyond their cloistered walls. The most important? That explaining to users what they're getting into may save them a lot of time and trouble . . . and a good deal of embarrassment.

But AOL is not the only service with Net-related troubles. Prodigy opened a local Internet bulletin board so its users could discuss the global computer network. But somewhere along the line a signal got crossed, and users thought the bulletin board *was* the Internet. Messages to the tune of "Hi, I'm in Nebraska. Is anyone out there?" propagated the board, as more savvy participants tried to explain—with limited success—what was going on. So Internet citizens, fresh from dealing with 650,000 spanking new AOL users, dread the impending flood from Prodigy's and CompuServe's four and a half million total subscribers.

America Online: Act II

Despite some problems with quirky Usenet software (it posted some users' messages up to a dozen times) and untrained users, America Online has weathered the storm, and now is ready for the next step. AOL now offers a Gopher client and limited access to some WAIS databases. FTP and telnet services also are planned, although no date has been set, according to managing editor Kathy Ryan. "We've been driven by what our customers ask for," she said.

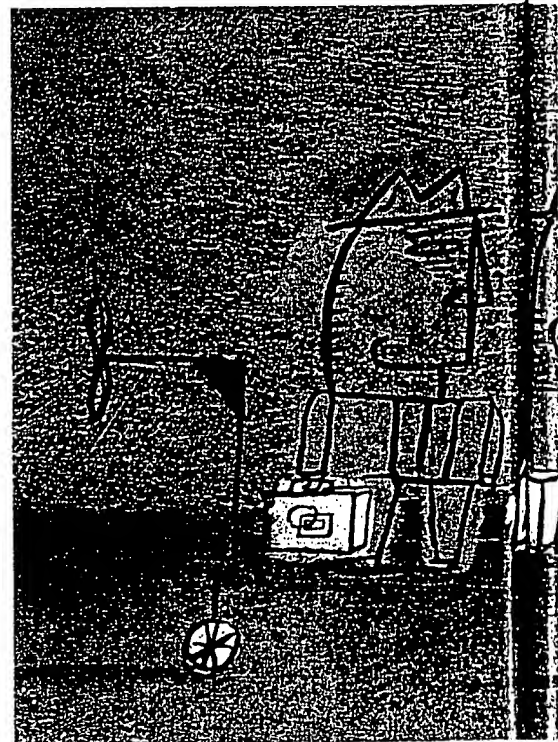
However, AOL's Gopher and WAIS services won't look familiar to veterans of the Internet, and not just because of the graphical look. The two applications have been combined under a single interface: a Gopher-like series of menus that present either text files or other menus. In addition, AOL is limiting the Gopher

information it will make available, and users will only be able to easily access Gopher services that AOL's editors have chosen. Veronica searches also are limited: You cannot choose the server to search. And WAIS searches will not return the relevancy information the system is known for. Thus, AOL's combined Gopher/WAIS offering is a watered-down version of both applications that seems to promise more than it delivers—a charge AOL has faced before.

AOL has been courting partners to increase the services it provides. An alliance with publisher Simon and Schuster, for instance, will allow AOL to offer College Online to provide e-mail and other resources for students and educators as an alternative to the Internet.

Another service being tested is a TCP/IP connection that will enable users to access AOL through an office LAN or via a SLIP or PPP Internet connection. The beta software is only available for

Illustration by James Yang



Macintosh users, and is located at AOL's anonymous FTP site, ftp.aol.com, in the /mac directory. The file is called TCP-for-Mac-AOL-2.1.sea; a README file provides instructions. (AOL's standard Macintosh and Windows software is also available at that site.)

On the Usenet front, complaints about AOL users continue to mount. According to Ryan, "(the reaction) wasn't surprising. When we came onto the Internet, I believe we came on as the single largest site, and we did have some members who didn't understand netiquette." But that's changed now, she says. "I think AOL has done more to educate its users than anyone else." For instance, the service now has unofficial "Net buddies"—Internet-savvy users who monitor Usenet and inform newcomers when they violate netiquette.

America Online's users are not entirely to blame, according to some. AOL software makes it difficult to reply by e-mail (users must post personal follow-ups instead) and users cannot include original message text in their replies. AOL users also must pay \$3.50 per hour to use News because there is no off-line newsreader. That means, as one user puts it, that they must pay to think; the more they think about what they write, the more it costs.

In late August, thanks to an aggressive campaign of giving out free trial

accounts, AOL claimed to have reached the one million subscriber mark, making it slightly less than half the size of CompuServe or Prodigy.

CompuServe: Slow and Steady May Win the Race

While AOL was opening its doors to let its users out, CompuServe's first step was to let its users *in*, by allowing users to telnet to their CompuServe accounts from the Internet. CompuServe can do this for one simple reason: Its service is text-based (although graphical front ends are available) and thus well-suited for use through one of the Internet's typical terminals.

Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time, but it charges for e-mail usage beyond a certain volume: After about 60 free three-page messages each month, users must pay approximately 5¢ for each 1,500 characters they send or receive.

CompuServe recently gave its users access to Usenet News, and provided plenty of warning signs along the way ("This information originates *outside* of CompuServe, and CompuServe therefore claims no responsibility for the content."). However, CompuServe's Usenet software suffers from some of the same problems as America Online's. Most obvious is the inability to automatically insert text from an original message into a follow-up message.

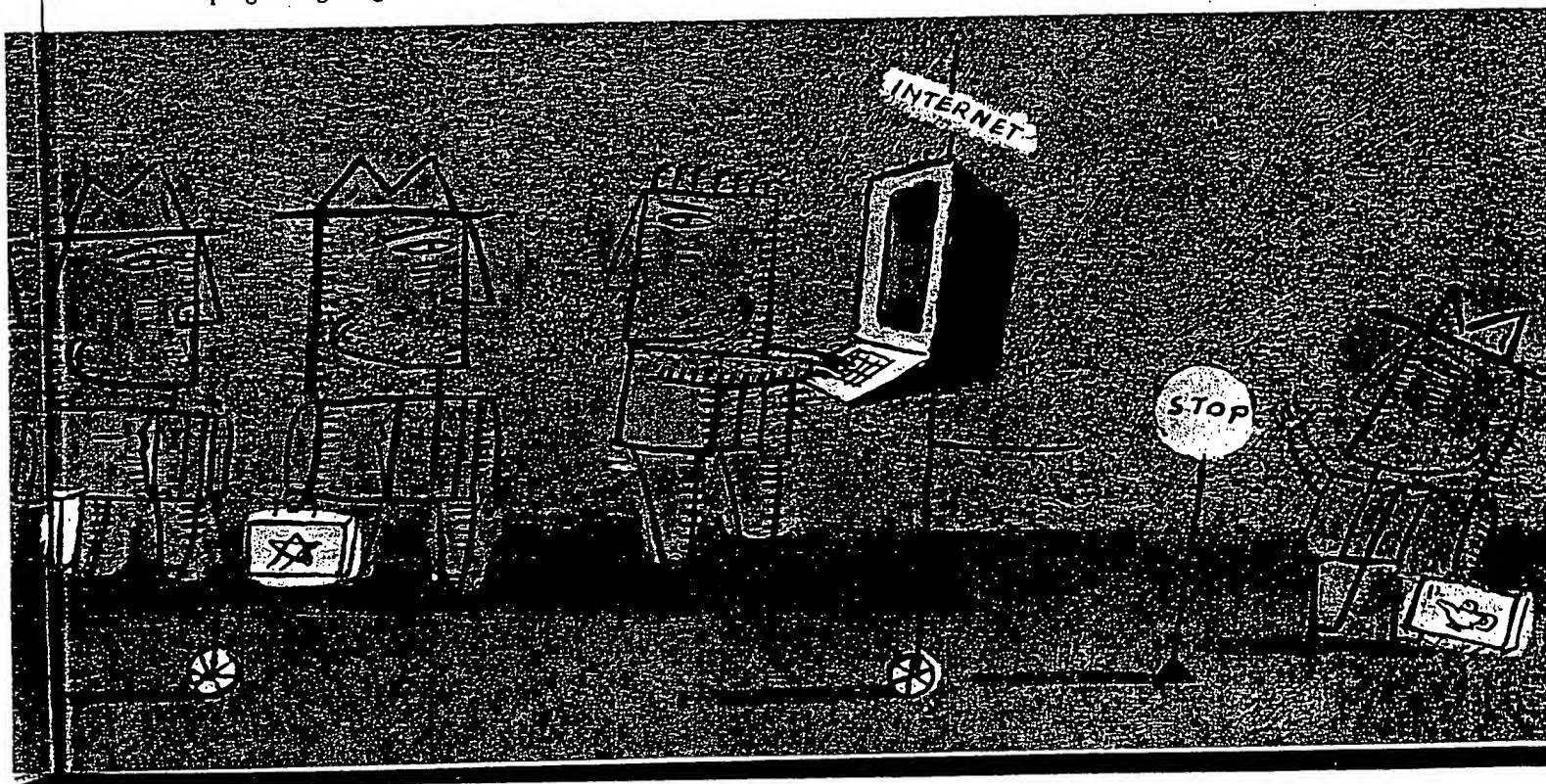
CompuServe's Usenet software betters AOL's in one way: When you choose to reply to a message, the default settings send the reply through e-mail only, and not into the newsgroup—a feature many Usenet residents will appreciate.

While seeking to protect the Internet from breaches of netiquette by its members, CompuServe also is trying to shield its members from any perceived offensive aspects of the Internet. Scroll through the lists of available newsgroups on CompuServe, for example, and alt.sex is nowhere to be found. However, you can subscribe to the newsgroup by typing in the name yourself.

Choosing a group from one of CompuServe's lists is no piece of cake. You must slowly scroll through hundreds of listings in alphabetical order. For example, to find alt.tv.something, you must make your way through everything from alt.1d to alt.travel.roadtrip.

And if you happen to subscribe to one of the ".binaries" newsgroups, where people post encoded pictures, sounds, or movies, the newsreader software offers no means to decode them. America Online left out this function as well, much to the chagrin of the people who frequented those groups.

According to Dave Bezaire, CompuServe's senior product manager, the service is planning several other new Inter-



"Our intention is to be very clear with our members about what the Internet is—to make them aware that they're leaving this world."

net-related features, but does not want to release too many new offerings at one time. "The tremendous press coverage of the Internet has raised expectations sky high," Bezaire says, "so we want to avoid overhyping it in our community before it's available."

Bezaire would not comment on what else might lie ahead for CompuServe. "Our philosophy is to bring Internet services forward on an incremental basis—manage the process, manage the service, and educate the community," he said. "As we release additional Internet products and services, I want it to be a satisfying experience for all our members."

GEie: Holding Its Ground

GEie has been offering an e-mail gateway to and from the Internet for several years, but nothing more. That's the way it will likely stay "for the foreseeable future," according to Vivian Kelly, media relations specialist.

As on AOL, e-mail on GEie is free and unlimited. And GEie users are not entirely cut off from the Net: It offers an Internet RoundTable, in which sysops will gladly search for and retrieve files if requested by users, and will even scan files for viruses. But Kelly says that GEie has been reluctant to offer full Internet access because the service is part of General Electric Information Services (GEIS) and its corporate customers have concerns about security.

Prodigy: In Time, All Things

With more than two million individual users, Prodigy is the world's largest on-line service, and it is preparing to open its door to the Internet—albeit slowly.

Prodigy already has an e-mail gateway to the Internet, although users must acquire separate software to send and receive messages. But that's going to change,

according to product manager Bill Day, who said that basic Internet e-mail capabilities would soon be integrated into the software. "We're reorganizing Prodigy to put more focus on the Internet," Day explained. "We're very excited about it."

The next phase of Prodigy's Internet access will be some refinements to the e-mail software, and access to Usenet News. And Day said the service had given a lot of thought to how Prodigy users would react to the Internet, and vice versa. "We've been thinking about how we should educate our people on how the newsgroups operate. We need to cover How do you behave, and What do you not do?"

Prodigy will try to lessen the force of the impact—if not the scope—in several ways. First, it will cache Usenet News on its own server to reduce the impact on the Internet. Second, unlike America Online, Prodigy won't be making it easy to reach Usenet. "Our approach is that you have to be interested and knowledgeable enough to reach these services," Day said. "The people must be communications savvy. It's not point and click." Those measures, coupled with a "strong education effort," he said, should mean that Prodigy users would know how to behave when they reached Usenet.

Prodigy is also planning to offer services that don't appear on the Internet, including an alliance with CBS to offer interactive entertainment features including show previews.

In terms of the Internet, Day said that Prodigy eventually would offer some sort of Gopher-like access to information on the Internet, including government resources, sound files, and other data that might interest users. But the information would be far from comprehensive, and would be a selection of some of the more popular files. "We would act as a mediator between the Internet and our members," Day said.

"Our intention is to be very clear with our members about what the Internet is, and to be honest about the world out there—to make them aware that they're

leaving this world," Day explained. "We're thinking hard about what we've learned about content and customer service by running our own little on-line service, and that will affect how we pick content and how we present it to people."

Down the Road

The major on-line services are not rushing to provide full Internet access because doing so might well lead to their demise. After all, no matter how you access the Internet—from school, a local provider, or a commercial service—the content is the same. And as better, user-friendly Internet interfaces like Mosaic and Eudora are developed, AOL, CompuServe, and Prodigy will find it harder to differentiate themselves from the Internet.

How can the on-line services compete in this evolving landscape? First, they must keep a step ahead of the Cellos and Trumpets, and must design interfaces that any junior high school student can use. They also must develop a friendly help staff to assist users in learning to cruise in cyberspace. Users only will be willing to pay more if they're getting something extra, such as 24-hour support.

The on-line services also will have to stop charging hourly fees for Internet services. Anyone who follows more than five or six newsgroups knows that on-line time can add up, so why pay \$3–\$10 per hour when you can find a local Internet provider that charges a flat rate?

Another way on-line services could compete with the Internet would be to filter it. Users could be guaranteed an environment that's friendlier, if not as open—a homogenized, pasteurized, porn-free, flame-free Internet.

Now is not the time to place bets on which of the on-line services will prosper or survive. The landscape is changing every day, and no one can venture more than a guess as to how the market will shake out over the next few years.

Andrew Kantor (ak@mecklermedia.com) is associate editor of Internet World.

On Haiti, Shooting From the Lip The Washington Post October 6, 1994, Thu

19 of 21 DOCUMENTS

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October 6, 1994, Thursday, Final Edition

SECTION: STYLE; PAGE B7; CYBERSURFING

LENGTH: 939 words

HEADLINE: On Haiti, Shooting From the Lip

SERIES: Occasional

BODY: "

Pit Stops

For those visiting London who are in need of a quick daytime fix, "Cyberia" -- a "cyberspace cafe" -- has opened recently in central London offering coffee, cakes and connection to the Internet. **Connect charge: 1.95 British pounds** per half-hour. The address is 39 Whitfield St., W1 (near to Goodge Street underground station on Tottenham Court Road).

Jeremy Robinson

robinson@well.com

We also hear that at the Infomart in Dallas, off the Stemmons Freeway west of downtown, the newly opened High Tech Cafe has a computer maitre d' that asks diners in its machine voice, "Nonsmoking, smoking, or modem-ready?" Sure enough, not only is there a phone jack at the table, but a fax machine is ready nearby.

Found something intriguing, improbable, insane or especially useful on the Net? Tip Karen Mason Marrero (kmarrero@aol.com) or Joel Garreau (garreau@well.com).

GRAPHIC: ILLUSTRATION, MARC ROSENTHAL FOR TWP

LOAD-DATE: October 6, 1994

- Attachment H

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE NORTHERN DISTRICT OF ALABAMA
3 EASTERN DIVISION

4 RICHARD P. METTKE,

5 Plaintiff,

6 vs.

7 TOUCHNET INFORMATION SYSTEMS,
8 INC.,

9 Defendant.

10 **ORIGINAL**

11 No. 98-PT-596-E

12 THE DEPOSITION OF DANIEL J. TOUGHEY, produced,
13 sworn and examined on behalf of the Plaintiff pursuant
14 to Notice, between the hours of eight o'clock in the
15 forenoon and six o'clock in the afternoon of Tuesday,
16 June 16, 1998, at the law offices of Spencer, Fane,
17 Britt & Browne, 1400 Commerce Bank Building, 1000
18 Walnut, in the City of Kansas City, in the County of
19 Jackson and State of Missouri, before me,

20 LYDIA HURLEY, RPR
21 BOWEN MOTTER REPORTING
22 911 MAIN, SUITE 1930
23 KANSAS CITY, MISSOURI 64105

24 a Notary Public in and for Jackson County, Missouri,
25 in a certain cause now pending in the United States
District Court for the Northern District of Alabama,
Eastern Division, wherein RICHARD P. METTKE is
Plaintiff and TOUCHNET INFORMATION SYSTEMS, INC., is
Defendant.

A P P E A R A N C E S

For the Plaintiff: Tobor & Goldstein
1360 Post Oak Blvd., Ste 2300
Houston, Texas 77056-3023
By Mr. John T. Polasek

For the Defendant: Spencer, Fane, Britt & Browne
1000 Walnut, Suite 1400
Kansas City, Missouri 64106
By Mr. Richard P. Stitt

- Attachment I -



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S T I P U L A T I O N S

It is hereby stipulated and agreed by and between the parties herein that presentment to the attorneys of record of a copy of this deposition shall be considered submission to the witness for his signature within the meaning of Federal Rules of Civil Procedure; but shall in no way be considered as a waiver of the witness' signature, and is to be signed at any time before the time of trial; and if not signed by time of trial, may be used with the same force and effect as if signed.

I N D E X

WITNESS:	PAGE
DANIEL J. TOUGHEY	
Examination by Mr. Polasek	4
Examination by Mr. Stitt	83
Further Examination by Mr. Polasek	98
SIGNATURE:	107
CERTIFICATE:	108

I N D E X O F E X H I B I T S

NO.	DESCRIPTION	PAGE
1	Notice	5
2	Answer to Interrogatory No. 1	17
3	Network Topograph Diagram	20
4	John Murphy Affidavit	25



INDEX OF EXHIBITS (CONT'D.)

NO.	DESCRIPTION	PAGE
5	Videotape "TouchFax America"	40
6	1st brochure of product	54
7	TF700 TouchNet terminal brochure	55
8	TF700 brochure	56
9	Not identified	-
10	Ad for Telephony Magazine	57
11	TF450 brochure	58
12	Interactive World article, 10/92	59
13	Multimedia Interactive Terminal Loc. ducmt	59
14	KC Business Journal article, reprint	60
15	1992 brochure	60
16	Copy of Patent # 4359631	63
17	Info from VPR Creative Group	66
18	Invoice from Spinnaker	67
19	Invoice to Prodigy	68
20	Printout of source code/transaction log	69
21	Documents re: TON Services, Inc.	70
22	Documents re: Mediatel	74
23	Fax to D. Vermeire, 11/92	77
24	Document to D. Vermeire, 9/92	79
25	License Agreement	80

(Exhibits were retained by Mr. Polasek)



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1 wide web sites they would like to go to. And I
2 believe now America On-Line has a world wide web
3 site and a dedicated interface through a dial-up
4 system, so they have two different paths, if you
5 will. And so I guess ours is the latter, we will
6 provide access to the internet and let somebody
7 decide where they want to go.

8 Q Okay. Let's back up. I was asking you questions
9 that relate to a user of the terminal being billed
10 for access to the internet through the use of a
11 commercial on-line service provider such as
12 Prodigy or AOL, CompuServe.

13 A Yeah.

14 Q And you said that TouchNet does not currently use
15 or have a terminal that does that.

16 A Correct.

17 Q But you did indicate they have plans to do so?

18 A Correct.

19 Q Okay.

20 A But not necessarily through America On-Line as a
21 internet service provider.

22 Q Okay. Then how is it that --

23 A You will go through a variety of different
24 internet service providers so just -- Earth Link,
25 for example, they provide -- let's say they



1 provide internet dial tone basically, right?

2 Q Okay.

3 A And our systems then will -- as if you are the
4 user, will ask you where you want to go.

5 Q Okay.

6 A Or highlight different destination points on the
7 world wide web.

8 Q But if I am the user --

9 A Uh-huh.

10 Q -- I am going to have to put my credit card in
11 there and pay for that access, correct?

12 A That is the plan.

13 Q Okay. And what I am trying to get at is, do we
14 have the terminal and the software set up to do
15 this? Do we expect to roll out a terminal this
16 year, next year --

17 A Yes.

18 Q -- or when?

19 A Very soon.

20 Q At the present time, TouchNet has not rolled out
21 one of those terminals though?

22 A Not that charges for the service.

23 Q Okay. When you say very soon, can you be more
24 specific?

25 A Sometime in the next 30 days. But, again, it is



1 Q That would be on that particular machine?

2 A It would be stored, yes, on that particular
3 machine.

4 Q If they went to a different machine in another
5 part of the airport or something, their card would
6 go through the same validation procedure?

7 A Correct, right, correct.

8 Q This exhibit, Exhibit 3, also references an
9 on-line interactive database. And the second
10 bullet point below that, it says, Public - Access
11 to CompuServe, Prodigy.

12 A Correct.

13 Q This goes back to our earlier discussion, but the
14 terminal that this document attempts to describe
15 does not disclose the use of the credit card to
16 pay for access to CompuServe or Prodigy, correct?

17 A This document doesn't specifically do that.

18 Q And at that time, TouchNet was not -- the terminal
19 was not set up to charge the user for access to
20 CompuServe or Prodigy; is that accurate?

21 A Well, at that time, the terminal didn't even have 1991
22 CompuServe or Prodigy on it. At that time, these
23 were -- these are ideas of what you could do
24 because, again, our main business was selling to
25 third parties our system.



1 internet pop up there. Did you notice that?

2 A No, I didn't.

3 Q Let's see if we can go back. I'm not able to get
4 it stopped there. See if I can try it again.

5 MR. STITT: Let me give it a try.

6 THE WITNESS: I think I did see that.
7 You are in front of it now.

8 (Whereupon, the videotape, Exhibit 5,
9 was rewound to counter 34.)

10 Q (By Mr. Polasek) Now that we have been able to
11 stop the tape, it shows a rectangular gold block
12 labeled internet. I think it is right at -- I
13 thought it was the 36 second mark. It may be 34.

14 MR. STITT: It appears to be 34.

15 Q (By Mr. Polasek) Did that provide for access to
16 the internet? If the user was to touch that icon,
17 I guess is what you would call it, that portion of
18 the TouchNet screen, does that enable a user to
19 gain internet access or do you know?

20 A Not at that time, no. That was like MCI mail
21 above it. Those are possible uses for the system.
22 And so the reason we built this video was to sell
23 our systems. And so, again, the vision of
24 TouchFax, TouchNet was its multipurpose
25 information communication terminal that, depending



1 other types of information databases such as USA
2 Today sport center for on-line sports information.

3 And then the last bullet is BBS, which is for
4 bulletin board service applications, any kind of
5 bulletin board, which was really, you know, a
6 predecessor in many respects, you know, to the
7 world wide web. Different types of information
8 bulletin boards that our system could access.

9 MR. STITT: I think we can go on unless
10 you have redirect.

11 FURTHER EXAMINATION

12 BY MR. POLASEK:

13 Q Yeah, I have some questions starting with what was
14 marked as Exhibit No. 3. Let me start over. With
15 regard to Exhibit 3, isn't it accurate that access
16 to Prodigy and CompuServe was not available at the
17 time that this document was prepared on the
18 TouchNet terminal?

19 A That's correct.

20 Q Okay. So at the time that this document was
21 prepared, you couldn't access Prodigy or
22 CompuServe from a TouchNet terminal?

23 A In 1991, that's correct.

24 Q And this document -- again I think we have been
25 through this -- this document itself does not



Expedited/Special Dispatch



APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

Title: On-line Communications Terminal/Apparatus
Group Art Unit: 2743

Examiner: Stella Woo

REVISED APPEAL BRIEF TO THE COMMISSIONER OF PATENTS
BASED ON NOTIFICATION OF NON-COMPLAINE WITH THE
REQUIREMENTS OF 37CFR 1.136, DATED June 25, 2007

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited on
6/29/07 with the US Postal Service with return
Receipt requested. The envelope was addressed to:
Commissioner of Patents and Trademarks,
Mail Stop Appeal
P.O. Box 1450 Alexandria, VA 22313-1450

Commissioner of Patents and Trademarks,
Mail Stop Appeal,
P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In response to the notification of Non-Compliance with Requirements of 37 CFR, dated June 25, 2007, the applicant submits the following revised Appeal Brief to the Commissioner of Patents. The revised Appeal Brief is in accordance with Code of Federal Regulation 37, section 41.37. In a discussion with Ms. Darlene Brown (USPTO) on June 26, 2006; it was explained that as a pro se appellant (not represented by a registered practitioner), the appellant's appeal brief only need to only substantially

comply with paragraphs (c)(1)(i) through (c)(1)(iv) and (c)(1)(vii) through (c)(1)(x) of this section. It was further noted that as a pro se appellant, the only items that I needed to address were to add an Evidence Appendix and Related Proceedings Appendix. No other corrections were required. These corrections have been made

Because this is part of a reissue prosecution, this case should be special and expedited. I am appealing the examiner's rejection (35 USC 103 (a)) of the claims in my Request for Continued Examination (RCE) under 37 CFR 1.114. The RCE was filed on 27 November 2006. A Final Office action was issued on February 23, 2007. This is a reissue application of Patent 5,602,905. I have presented a *prima facie* case for the allowance of the claims during the prosecution of the reissue application. As this reissue case has been prosecuted for almost nine years, the applicant requests that a sense of urgency be given to this appeal and it be dealt with as a special dispatch as required by reissue actions, contrary to how it has been processed in the past.

1. **Real party in interest.** I, Richard P. Mettke, appellant, am the real party in interest.
2. **Related appeals and interferences.** There are no appeals or interferences known to the appellant which would directly affect or have a bearing on the Board's decision in the pending appeal.
3. **Status of claims.**
 Claims 6 is pending
 Claim 6 was rejected by the examiner.
4. **Claim 6 is being appealed.**

5. Status of amendments. All amendments and responses to Office Actions have failed to persuade the Examiner. No amendments are pending.

Summary of invention.

The present invention disclosed herein comprises a system for accessing and interfacing the Internet using a credit card. The system includes a video display monitor coupled to a CPU; a keyboard for providing user interface coupled to the CPU; a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal or other activity; means for accessing the Internet and allowing for user interaction; software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

Users can publicly access and interface with the Internet and pay for use or activity using a credit card. The applicant has hard time not viewing that the previous BPAI decisions were not based on hindsight. The BPAI had to present the combination of ~8 pieces of prior art two different ways in rendering their decision that the applicant claims were obvious. Furthermore, there was no discussion of the state of Internet which was key here. 1994 and 1995 were key years in the development of Intranet technologies and processes. That was a crowded time frame for Internet technologies and processes. Some of these processes and technologies may seem to have been "common sense" or obvious now, but until the growth of the Internet, they were by no means obvious. What were you doing with the Internet in January 1995? Would you have paid to access or perform some action at a terminal? I will show in this brief that the BPAI (and examiner) made many errors in their decision and that this case should have never been sent to the BPAI. The BPAI erred in its interpretation of the scope and wrongly used hindsight to combine prior

art, in essence blue printing the applicants claims to obviousness. The BPAI erred in describing the level of ordinary skill in the prior art. I will show how later in this brief. There were too many differences in the ~8 pieces of prior art that the BPAI combined to render the applicants claims as obvious. The applicant will show in this brief other considerations, which serve as indicia of nonobviousness that will include, commercial success, unsolved need and failure of others. This case and its claims should have been allowed over 7 years ago.

The appellant would like to note the original Patent was applied for on January 23,1995 and granted on February 11, 1997.

6. Issues.

I. The drawings:

The examiner objected to the drawings because the original disclosure does not support the showing of the terminal housing as depicted in Figure 2, which was submitted as part of a substitute sheet of drawing during the prosecution of the original patent for the same reasons given in the final Office action mailed March 12, 2002. Her rationale was that Figure 2, as originally filed shows a cubicle with a work area/desk top, privacy wall, chair/ stool and a terminal device generally labeled as numeral 2. There is no support in the original disclosure for the terminal housing as incorporating the monitor, keyboard, and credit card reader in the manner depicted in the current Figure 2. The examiner states that correction is required.

II. New Matter- The examiner states in the final office action mailed March 12, 2002, new matter was added as an amendment to the specification during the prosecution of

the original patent. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: col. 2, lines 3-7; col. 2, line 53 - col. 3, line 3.

III. Claim Rejections - 35 USC § 103

The examiner rejected Claim 6 under 35 U.S.C. 103(a) as being unpatentable over the article by Allen Weiner, entitled "TouchFax Provides the Ultimate in Place-Based Interactivity" (submitted as Exhibit E in the TouchNet Protest on November 4, 1998, hereinafter "Exhibit E") in view of the TouchFax brochure entitled "Vision, Power, Versatility" (submitted as Exhibit F in the TouchNet Protest on November 4, 1998, hereinafter "Exhibit F"), and further in view of an article by Rawn Shah entitled "Suggestions for Information Kiosk Systems using the World Wide Web", submitted with the Protest by North Communications, Inc. as Exhibit I (hereinafter "the Shah article") for essentially the same reasons given in the final Office action mailed March 12, 2002 and the Examiner's Answer mailed August 17, 2005, and affirmed by the BPAI Decision mailed August 31, 2006. The examiner also rejected claim 6 on the grounds of *res judicata* (see MPEP 706.03(w)).

lines 11-12).

IV Applicants argument that the Shah Abstract teaches away accessing the Internet.

The examiner states that the applicant's arguments that filed October 25, 2006 have been fully considered, but they are not persuasive. The Applicant argues that "Shah teaches away from accessing the Internet." The examiner disagreed. Her rationale; Firstly, the title of the Shah article is "Suggestions for Information Kiosk Systems

using the World Wide Web." On page 2, line 4, Shah clearly states that "the Web is part of the Internet. This allows users access to the many services on the Internet." Moreover, in the BPAI decision, which is in effect, the "law of the case" (see MPEP 706.03(w)), the Board states that "Shah teaches, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. Shah suggests that consumers wanted access to the Internet for these services.

7. Grouping of claims.

The Examiner has rejected Claim 6 as not being patentable (35 USC, 103 (a)).

8. Argument.

Issue I- the drawings; whether new matter was introduced into the drawings

The applicant respectfully submits that the same examiner accepted the resubmission of his drawings in 1996. The resubmission was based on the examiner's direction in office action dated, April 27, 1995, page 2, line 3, "Therefore, the modem, central processing unit, monitor, keyboard and printer must be shown or the features cancelled from the claims. The applicant is at a loss at how an examiner can frequently change their mind as to what is proper and what is not proper in a patent prosecution. Never the less, the applicant will work with the examiner to determine what is acceptable, when the prosecution reaches the point of reissue.

Issue II New Matter-

The items that the examiner requested be removed which is not supported by the original disclosure (col. 2, lines 3-7; col. 2, line 53 - col. 3, line 3) where deleted in an Amendment dated May 29, 2002.

Issue III-Whether claim 6 is unpatenable under 35 USC, 103 (a) over the prior

art

In addition to arguments that will be provided below, the applicant feels that the BPAI's previous decision and review of the appeal should have been held to the standards of Section 706 of the Administrative Procedures Act (APA). The BPAI should have reviewed this case on what was in the record (Four Corners of the closed record) and not be allowed to bring in references or make decisions based on expertise or experience. This would have prevented hindsight (the applicant's disclosure was in JAN 95, over 12 years ago). Hindsight is difficult to overcome in case that has been going on for such a lengthy period. By not adhering to section 706, APA, the board's previous decision lends it self to question whether there was an impartial review of the record. The BPAI states "that this case was important because of dismissed civil litigation (cases that were dismissed 1998 and 1999) and protests that were filed". Does that mean that other cases are not as important? It appears that the previous BPAI review of this case was given more scrutiny then other actions before the board. Had the procedures in the APA been followed, there would not have been any perceived irregularities or perceptions. Based on the above, the BPAI should remove from the record any mention or reference to the Internet Navigator, Aliens among Us, On Haiti, Shooting from the hip and any reference to Wikipedia. Any decisions made on this case should be made from the record. The Examiner based her response in the Final office action, dated February 23,2007 for the most part on her previous responses to office and appeal actions (not withstanding the applicant's arguments that the Shah Abstract teaches away from accessing the Intranet that is addressed below in Issue IV). The examiner pretty much summed up that the applicant's comments/arguments relating to that the patentability of Claim 6 was without

merit because of the BPAI's decision of August 31, 2006 which is in effect, the "law of the case" or *res judicata*. The applicant respectfully disagrees that he can not rebut the BPAI's decision, otherwise the August 31, 2006 decision would have been made final for judicial review. At least the applicant would hope so. Otherwise, the applicant would be wasting another twelve months or more submitting another appeal. This case has clearly taken too much time in to come up with a final resolution. If I had to keep an attorney on retainer to prosecute this case for the entire time, I'm sure it would have cost the applicant \$ ~ 3-5 million, over the almost 9 years it has taken. I'm surprised that any independent inventor can get anything patented. I intend to address my comments/arguments to both the BPAI decision of August 31, 2006 and the Final Office action of February 23, 2007 relating to the rejection of Claim 6 in the following paragraphs.

The applicant disagrees that "TOUCHFAX AMERICA, video tape recorded May 14, (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA)" render claim 6 obvious. The videotape is clearly a concept, experimental, an idea and marketing tool. The examiner rightfully excluded it in an Office Action dated August 24 1999, page 8, 3rd paragraph". Although Exhibit C, 4 shows a frame from the video tape of exhibit C advertising connection to the Internet, it was stated in the deposition Daniel J. Toughey (attachment D, pages 14-15 of RCE) that the terminal shown in the video tape did not actually enable a user to gain access or interface with the Internet.

This alone should have negated its use as prior art or use as rendering the applicants' claims as obvious. The applicant also disagrees that TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest) is prior art. In his deposition (attachment I, page 22 & 98 of RCA), Mr. Toughey states specifically that in 1991 (the time the document was distributed), the terminals did not have access to the Internet, Prodigy and CompuServe. This was a concept, experimental, an idea and marketing tool. This alone should have negated its use as prior art or use as rendering the applicants' claims as obvious. Probable utility does not establish practical utility.

The BPAI rejected claims 6-9 under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D., Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

The BPAI states that in Exhibit E it states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (page 31, line 16 of BPAI decision) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax terminals to provide public online services and public Internet access as those features became common at home and business."

The applicant does not understand how this is a "suggestion to modify" a TouchFax terminal to include Internet access and interface. The only suggestion would be if they (Touchfax) saw the applicant's disclosure and added this capability to their terminal. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access the Internet prior to the date of the applicant's

disclosure in January 25, 1995. He also goes on to state that as of the date of his deposition, **June 16, 1998**, **no** Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15, 44, original/first appeal). This is three and a half years after the applicant's disclosure on January 23, 1995. This clearly points to nonobviousness and demonstrates a lack of suggestion, teaching or motivation.

The BPAI suggests that the motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all of the exhibits are from the same corporation, TouchFax, and expressly teach modifications.

The applicant respectfully disagrees that there is motivation to combine Exhibits C, D, E, and F and that they expressly teach the modifications to add Internet access and interface on a point-of-sale basis. The BPAI does not "show" objectively how the references teach this modification other than seeing the applicant's disclosure in January 1995.

Mr. Massey's statements in his deposition, "that the BPAI quotes" stated that they (exhibits E & F) have the capability to expand or modify the terminal applications to "meet customers needs" are indefinite and probable. Of course he is going to say this when he is under going a litigation deposition. There is no corroboration of his statements. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access or interface with the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of the deposition, **June 16, 1998**, **3 ½ years after the applicants disclosure**, **no** Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15, 44). This was **three and half years** after the applicant's disclosure and clearly and unequivocally points to **nonobviousness**.

I would like to point out that there are distinct and clear difference's between Commercial On-line Services (AOL, Prodigy, CompuServe,etc) and the Internet. The BPAI has for the most part adequately defined them in their August 31, 2006 decision. I shall not repeat the descriptions here.

I will take exception to the BPAI's interpretation of access (and interface; which was not addressed in their email analysis) to the Intranet. The BPAI stated that because some of the Commercial On-line services provided email, they provided access to the Internet via e-mail. The board stated on page 47 (BPAI decision), that the claims recite access to the Internet is met by access to "one service" on the Internet, such as e-mail. The board also states that email through a Commercial On-line service provider (AOL,Prodigy, Compuserve, etc.)that uses the Internet to send email qualifies as "access to the Internet".

The applicant respectfully asks the questions; What about interface?

The applicant respectfully disagrees that accessing on-line service providers qualify as Internet access and interface. Claim 6 states "accessing the Internet ", as well as interfacing with the Internet. My claims do not say that you have to go through the method of point A (commercial on-line service) and B (send an email) and then point C email goes through the back office on-line service propriety architecture and may or may not be sent over the Internet. Clearly the claims in 6 say access and interface with the Internet. You either have access and interface or not. This an area that the applicant feels is clear a case of blue printing by the BPAI; using my disclosure to put together pieces of prior art to teach my claims.

On Haiti describes that "'Cyberia' -- a 'cyberspace cafe' --has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour."

On Haiti has 26 words in the article. There is not enough information to assess this prior art. There is not enough detail that discloses the structure, interface, and processes for this reference to be applied as prior art. Let alone suggesting, teaching or showing motivation to combine. Regardless, the BPAI has not provided any clear specific evidence to support the combination or modification as they suggest. The BPAI's unsupported methodology in using Haiti and its combination of prior art could render just about any patent obvious. Suppose it was an article about a "man sells cold soda from his store.....and 19 more words". Using the methodology above, the BPAI could determine that all vending machines and associated technologies (Refrigeration, coin acceptance machines, etc) were obvious. I could give many other examples.

The Landis & Gyr, ISDN console, Public telephone and telematic console. The examiner had reviewed; this relied upon prior art by the BPAI. In an Office Action Summary, dated August 24, 1999, the Examiner stated on page 8- 9, ".they lack certain elements in the claims, such as a printer, touch screen interface and Internet access." Hence it was not relied on prior art. The applicant agrees.

The scope of the invention Arguments

The BPAI defined the applicant's field of endeavor as a pay-per-use public communication terminal, and the particular problem with which the invention was concerned with was providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals. The BPAI also said the references

were within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access and interface or as pay-as you-use application.

The applicant respectfully disagrees that the terminals listed above (Exhibits C, D, E, F, L&G ISDN console) are within the field of endeavor (nor are they pertinent) to the matter at hand. They are not analogous art. None solve the problem of accessing the Internet or interface as the applicant's claims represent. If the terminals accessed the Internet (the problem that the applicant solves), allowed for interface on a point-of-sale basis, then they may have been pertinent and relating to the applicants field of endeavor. The BPAI use of Public Communications terminal is too broad as a field of endeavor.

Communications relates to many sub areas, facsimile machines, telephones, televisions, cellular phone and global positioning systems just to mention some of the areas. A more narrowed (and correct) field of endeavor would have been "Internet". Hence, if the proper field of art were used, it would negate the BPAI's analysis and resultant decision.

The BPAI brief states" Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet. (The last part of the underlined statement is pure speculation

inserted by the BPAI, as evidenced by Mr. Massey and Mr. Toughey statements that their terminals, more then 2 ½ years after the applicant's disclosure could not access the Internet).

It has been proven by statements in a deposition by Mr. Toughey, (Attachment I, pages 14-15,44), that the terminal in Exhibit C did not access or interface with the Internet. That the tape was a vision or concept. Also, in his deposition he stated that as of the date of the deposition (June 16, 1998), 3 ½ years after the applicants disclosure, that the referenced Touchfax terminals still did not have the capability to access and interface with the Internet as in the applicant's claims. So, how could it be a later improvement, as stated by the BPAI? Applicant fails to see how exhibit C "demonstrates" that the terminal "can" be built. Particularly when the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet, as previously mentioned in his deposition as late as June 1998. Furthermore, the applicant fails to see any objective or specific reasons provided by the BPAI as to how exhibits C, E and F show motivation to add Internet access and interface. Again, the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998 and exhibit C was a marketing tool and concept. Probable utility is not practical utility.

The BPAI brief states that" Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by

the same corporation provides **the express** suggestion to modify Exhibits E and F to provide access to online service providers.

Regardless of the BPAI interpretation of what qualifies for Internet access, the *Internet Navigator* (a reference provided by the BPAI) clearly points out that on-line service providers are not the Internet (page 57). As previously discussed, Touchfax representatives stated (in a deposition) that in 1991, the date of the publication, that they did not have access to on-line services such as Prodigy and CompuServe. This should have negated this document as any type of reference.

The BPAI stated that they approached "the obviousness issue from two directions. First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we **then show why it would have been obvious** to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer. Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the **express suggestion** to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a videotape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of

access to the Internet. Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

On Haiti discloses charging for use of a public computer terminal to access to the Internet. One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

The applicant fails to see any motivation, teaching or desirability to combine the references as shown; to teach the applicants claims. Nor does the applicant see how one skilled in the art would have been motivated by the BPAI reasoning for obviousness described above. The BPAI states that they are not relying on Exhibit C as a main reference, but ties it in with Exhibits D, E&F and On Haiti. The applicant fails to see how there can be an "express suggestion" to use Exhibit C, D, E & F in a combination to modify. As previously mentioned, Exhibit C was marketing tool and concept, not a capability. The owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition **as late as June 1998**. Also as previously mentioned, Exhibit D did not have the all the capabilities listed on it in 1991, particularly access to on-line services. Exhibit D was simply a concept or idea, a listing of capabilities that that did not exist at the time (1991). This was stated in a deposition by the owner of Touchfax (Attachment I of RCE, pages 22 & 98).

IV Applicants argument that the Shah Abstract teaches away accessing the Internet.

Just to be clear, the rejection (35 U.S.C. § 103(a)) of the applicants reissue is based on the combination Exhibits E & F (attachments C&D of RCA) and based on the teaching of Shah (Attachment B). The additional rejections by the BPAI will be addressed later in this document. Applicant will not directly address the combination of prior art discussed above since the new argument is that the Shah abstract teaches away from accessing the Internet.

A key point here is that the examiners (and BPAI) decision was based on the Shah reference teaching accessing the Internet (in combination with Exhibit E- Attachment C & Exhibit F-Attachment D). “Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract)”

The Applicant maintains and will demonstrate that the Shah teaches away from accessing the Internet. And hence should not be used as a prior art rendering the applicants application as obvious in combination with exhibits E& F. The applicant maintains that the both the Examiner and BPAI misinterpreted or misread the Shah abstract. The Shah abstract does not teach accessing the Internet. The Shah Article teaching using a **“web style browser”** on a standalone or networked (not to the Internet). It teaches away from accessing the Internet. The applicant will demonstrate this in the following analysis of the Shah Abstract. The entire article needs to be read and interpreted as a whole, not just the first few introductory paragraphs. It is clear that the Shah teaches away from accessing the Internet, and only wants to use the “Interface or web browser” popularized on the Internet in the Kiosks he describes. The irony I (from the applicants view) is that if you pull this

piece of prior art from the Examiners equation for a rejection it would be an "allowed" reissue patent and would have never went before the BPAI.

Analysis of the Shah abstract-

Summary- The Shah abstract teaches using a World Wide Web type "interface" (or browser)(**Emphasis added**) as part of an information kiosk system. Below is a "cut-and-paste" of the Shah relied upon abstract paragraphs with an interpretation and comments.

The first paragraph calls out the systems that he is referencing are "kiosk based"

- The second paragraph talks about how the Internets World Wide Web has provided the internet with easy interface (**emphasis added**)
- The third paragraph talks about the requirements that that an information kiosk system based upon the World Wide Web must have. Hence, it talks about a Kiosk-based information system based upon the World Wide Web in the context of a type of user interface (**emphasis added**) to be used in another application, not accessing the Internet.
- Another key point

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

World Wide Web has provided the Internet with an easy interface superceding access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Below is a cut-and-paste of the Shah "Introduction" in the relied upon abstract.

- Again, in the introduction Shah talks about user-friendly interfaces. He means the design of the World Wide Web interface; the browser (**not accessing the Internet**).
- Another key point in understanding the abstract is Shah's reference to Kiosk-based Information systems, not Internet based or accessible. Explicit that they are not connected to the internet, nor suggest it.

Introduction

Kiosk-based Information system has many requirements to create the most-user friendly interface while maintaining security and functionality. *User friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

Below is a cut-and- paste of the next Shah abstract paragraph.

They key to understanding/interpreting this paragraph is in the first paragraph.

Shah asks the question is why one would use the World Wide Web as a design for a kiosk-based information system. Key points are World Wide Web as a **design** (**Emphasis added**) and for a Kiosk- based information system. **Not Internet access.**

He goes on to talk about how the web and its capabilities (reference to the Browser or interface) are a standard on the Internet.

When he is talking about the Web, he clearly is talking about the Web and it's user **interface**. This paragraph has the only mention of the Internet in Shah's abstract. And it is only in the context of the Web (Browser) and its success on the Internet, not accessing the Internet

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Below is a cut-and- paste of the next Shah abstract paragraph.

Shah talks about interest in the World Wide Web. Then he goes on to talk about the various browsers. In context, he is talking about the functionality of the browsers. **Not interfacing or accessing the Internet.** And then he goes on to talk about who may have an interest in a “kiosk based” information system (emphasis added).

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organization who wish to provide a paid service through kiosks

Below is a cut-and-paste of the next Shah abstract paragraph.

Here Shah talks about the recommended user interface of the Browser.

User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage session's counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. If this were indeed an Internet accessible system, there would be no need for servers. He talks about connecting to a network and stand-alone systems with no network interface. So, at the most what he discusses is a Local Areas Network (LAN). Emphasis added. Not accessing the Internet (Emphasis added).

The Server.

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used. Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about

servers. This is **probably the most important paragraph** in my claim that the Shah abstract teaches away from accessing that the Internet. Here is where he talks about the

functionality of the kiosk- based Information system that he describes. Again, he talks about servers networked (LAN) providing the information. Not the Internet. If the system had functionality with the Internet it would have been in this paragraph.

Functionality

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemap are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. Her Shah talks about storage of data and associated problems. If this were Internet based or assessable this would not be an issue. He also talks about a the problems associated with local Kiosks (not networked)

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which

is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about security. Shah talks about security of stand-alone and networked systems

Again, when networked, it's a LAN. When standing alone all information is contained on the Kiosks. There is no mention of Internet access or interface.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the serves computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIXC, VMS, etc, operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often.... (Article cuts off here. But irrelevant...)

No comments on the last paragraph.

Control

Control involves the access to the Server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied is very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation. Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific access to documents or services. The concept of registered users and billing may be built in to the server.

In summary, the Shah abstract teaches using the World Wide Web "interface design" (browser) on a stand-alone (local) or networked (LAN). Therefore, it clearly teaches away from accessing the Internet. As the Shah prior art was the main reference that examiner (and BPAI) decided was rendering the applicant application obvious (because it teaches accessing the internet), when combined with Exhibits E and F. The Shah abstract does not teach, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. The analysis provided above clearly demonstrates this fact. The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the RCE Final Office Action and appeal brief to the BPAI. The applicant has taken the liberty of providing a "marked up" version of the Shah abstract at Appendix B-2 to assist in the interpretation.

9. Remarks

The BPAI has not shown any objective or specific teaching, suggestion or motivation as to why someone skilled in the art would combine the prior art references to yield what is in the applicant's disclosure, of January 1995, even though they approached the obvious analysis from two different avenues. The applicant feels that the BPAI used the applicant's disclosure to blue print pieces of prior art to defeat patentability. This has been clearly shown in the above arguments. As demonstrated in the applicant's

arguments, the BPAI decision appears to be a discussion of the ways multiple art references can be read on the claimed invention in **January 1995**.

The BPAI has failed to show any pertinent desirability that would suggest, teach or motivate the combination of the relied on prior art that would produce the results in the applicant's claims, disclosed in **January 1995**.

The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action of the RCA and appeal brief to the BPAI, as well as the BPAI rejections of obviousness to issue an allowance.

10. Summary.

In addition to the arguments provided above, additional indicia of nonobviousness relating to this reissue action should be considered and addressed by the BPAI:

- **The applicant's claims provides an unexpected result.** The appellant's invention provides for an unexpected result. The results achieved by this invention are new (at the time of the original disclosure), unexpected, superior, unsuggested by any of the relied on prior art. Specifically, a public access terminal allowing interface and access to the Internet and allowing for use a credit card for use of the terminal or other activity.
- **The application solves a different problem.** Appellant's invention solves a different problem than the references, and such different problem is recited in the claims. *In re Wright, 6 USPQ2d 1959 (1988)* Specifically, a public access terminal allowing interface and access to the Internet and allowing for use a credit card for use of the terminal or other activity. No prior art reference implicitly or explicitly had the capabilities

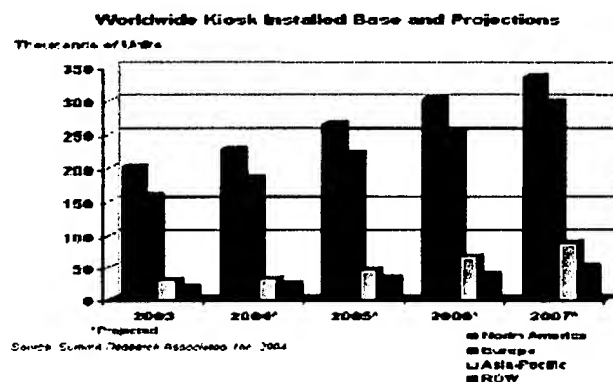
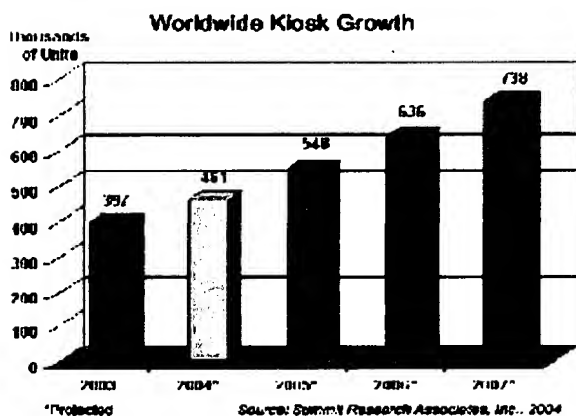
described in the appellant's claims at the time of the appellant's disclosure in January 1995. The evidence supporting this has been provided previously and in this appeal brief.

- **There has been unsuggested combination.** The prior art references do not contain any suggestion (express or implied) that they be combined, or that they be combined as the examiner and the BPAI suggests. The BPAI attempts to do this by combining ~8 pieces of prior art that was not suggested and suggest that the appellant claims were obvious. I stress that possibly in the current time frame the appellant claims would be obvious or viewed as common sense, but not at the time of the appellants disclosure in January 1995.
- **Modifications are necessary.** It would be necessary to make modifications, not taught in the prior art, in order to combine the references in the manner suggested by the examiner. This has been proven by the examiners and BPAI's numerous combinations of prior art and assumptions of those skilled in the art in JAN 1995. No convincing evidence to the contrary has been provided.
- **Multiplicity of references.** The fact that ~ eight references must be combined in two different methods (eleven counting the examiner) to meet the claims invention is unequivocal evidence of nonobviousness.
- **Prior Art References.** The Patent (5,602,905) that the applicant is prosecuting for reissue is referenced as prior art in 81 issued patents. A typical patent is mentioned as prior art ~ 6-12 times in issued patents. A patent that is mentioned ~12-30 times as prior art in issued patents is usually considered a technology leading patent and has a high rating factor for commercial success. So, I guess a patent that is mentioned 81 times as prior art in issued patents is a home run technology wise and commercial wise. This definitely points to nonobviousness.

- **Failure of Others.** Prior to the applicant's January 1995 disclosure, no entity had produced a terminal that contained all of the elements of the applicant's claims.

The examiner herself stated that in an office action, dated 08/25/99 (page 4 line 5-17) that the majority of the references that the BPAI cites as obvious, were not invented prior to the applicant's disclosure. The protestors had claimed that Exhibits C, D, E, F and G demonstrated that they made public the subject of the patent. The examiner ruled that they were not invented, unequivocally prior to January 1995. This should have ruled out any of BPAI's use of these references. The BPAI did not state that the examiner erred? Is this a case of the BPAI and Examiner refusing to admit they made a mistake? During the original prosecution, the USPTO admitted that errors were made in the prosecution, and had the moral courage to admit they made mistakes and allowed the patent. s

Commercial Success. The below graphics depicts worldwide Internet Kiosk growth that was on Summit Research Consulting web site (http://www.summit-res.com/kanditreport_gs.html) in April 2005. Summit Research are considered experts in the Kiosk field. At Appendix D is an overview of an Internet Kiosk report in 2002 by Summit Research. The majority of these kiosk employ elements of the appellant's claims.



Again, the appellant would like to reiterate, ^{as}~~has~~ been presented above, the BPAI's previous decision and review of the appeal should have been held to the standards of **Section 706 of the Administrative Procedures Act (APA)**. The BPAI should have reviewed this case on what was in the record (four corners of the closed record) and not be allowed to bring in references or make decisions based on expertise or experience. This would have prevented hindsight (the applicant's disclosure was in JAN 95, over 12 years ago), which is difficult to overcome in case that has been going on for such a lengthy period. By not adhering to section 706, APA, the board's previous decision lends it self to question whether there was an impartial review of the record. The BPAI states that this case was important because of dismissed civil litigation (cases that were dismissed 1998 and 1999) and protests that were filed. It appears that the previous BPAI review of this case was given more scrutiny than other actions before the board. Had the procedures in the APA been followed, there would not have been any perceived irregularities or perceptions. Based on the above, the BPAI should remove from the record any mention or reference to the Internet Navigator, Aliens among Us, On Haiti, shooting from the hip and any reference to Wikipedia. Any decisions made on this case should be made from the record (Closed four corners).

Appellant respectfully requests that the rejections be withdrawn and allowance be provided. The appellant has made a diligent effort to amend the application so that it is in an allowable state that defines a novel structure, nonobviousness, because it produces new and unexpected results at the time of the application (January 23, 1995).

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Mettke', with a long horizontal line extending to the right.

Richard P. Mettke
7921 Panary Court,
Reynoldsburg, OH 43068

Voice: 614-861-1847
FAX: 614-458-6446

Email: rmettke@aol.com

Appendices:

Appendix A- The Claims

Appendix B- Evidence Appendix

Appendix C- Related Proceedings Appendix

Appendix A-

THE CLAIMS

Claim Status:

The Claims:

Claim 6 (Amended)

A public on-line Internet terminal comprising a:

a central processing unit (CPU);

a video display monitor coupled to the CPU;

a keyboard for providing user interface coupled to the CPU;

a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal or other activity;

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

Appendix B- Evidence Appendix

THE WORLD WIDE WEB

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01 N. Campbell Ave., Ste 202B
Scottsdale, Arizona, 85719
602 318 0696 [US]

clean

World Wide Web Information Kiosks Special Interest Group

April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superseding other access systems in its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Introduction

Kiosk-based information system has many requirements to create the most user-friendly interface while maintaining security and functionality. *User-friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

I

Appendix
B-1-1

- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such systems. ←

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as $t = \infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

B-1-2

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

2/3/99 1:00 PM

B-1-3

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

References

- Berners-Lee, Tim, (1993). *Hypertext Transfer Protocol*, Working Internet Draft. CERN
- Cranin, Mary J. (1993). *Doing Business on the Internet: How the Electronic Highway is Transforming American Companies*, New York, NY: Van Nostrand Reinhold.
- Gaffin, Adam (1994). *Visiting Museums on the Internet*, Internet World Magazine, MocklerMedia Publishing, Inc. March/April, pg 24.
- Krol, Ed., (1994). *The Whole Internet User's Guide & Catalog*, Second Edition, Sebastopol, CA: O'Reilly & Assoc.
- MERIT, Inc. (1994). *NSFNET Byte Traffic History*.
URL: <ftp://nic.merit.edu/nsfnet/statistics/history.bytes>, March.
- Shah, Rawn, (1994). *Information Kiosks and the World Wide Web*,
URL <http://www.rtd.com/people/rawn/kiosks.html>

B-1-4

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602 318 0696 [US]

Write-on
version

e World Wide Web Information Kiosks Special Interest Group

April 1994

Abstract

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- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

I

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95 design
www design
95 on
Interface

~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~

- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

He means the web is
an interface or browser

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

Web Browser

The following are some examples of who might implement such kiok-based information systems:

Kiosk
based
hot internet

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
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Interface / POS

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No mention
of
Internet

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

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- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as t-infinity.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

hot
Internet
based

B-2-2

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

No mention of Internet

• User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webpace. → Browser
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

No mention of Internet in the User Interface

The Server

There are also suggested requirements for the Server program for these information kiosk systems.

Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Standalone or wide area network

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Functionality

→ No mention of Internet

B-2-3

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

- not internet

no
Internet

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No
Mention
of
Internet

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standalone or remote
server

no
Internet

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Local computer
network

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B-2-1

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Handwritten: The Internet

References

- Berners-Lee, Tim, (1993). *Hypertext Transfer Protocol*, Working Internet Draft. CERN
- Cronin, Mary J. (1993). *Doing Business on the Internet: How the Electronic Highway is Transforming American Companies*, New York, NY: Van Nostrand Reinhold.
- Gaffin, Adam (1994). *Visiting Museums on the Internet*, Internet World Magazine, MocklerMedia Publishing, Inc. March/April, pg 24.
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URL: <ftp://nic.merit.edu/nsfnet/statistics/history.html>, March.
- Shah, Rawn, (1994). *Information Kiosks and the World Wide Web*,
URL: <http://www.rtd.com/people/rawn/kiosks.html>

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Home	Quick	Advanced	Pat Num	Help
Next List		Bottom	View Cart	

Searching US Patent Collection...

Results of Search in US Patent Collection db for:

REF/5602905: 81 patents.

Hits 1 through 50 out of 81

Final 31 Hits

Jump To

Refine Search ref/5602905

PAT.
NO. Title

- 1 7,171,686 **T** Operating system extension to provide security for web-based public access services
- 2 7,155,663 **T** Technique for implementing browser-initiated user-transparent network-distributed advertising and for interstitially displaying an advertisement, so distributed, through a web browser in response to a user click-stream
- 3 7,149,958 **T** Technique for implementing browser-initiated user-transparent network-distributed advertising and for interstitially displaying an advertisement, so distributed, through a web browser in response to a user click-stream
- 4 7,149,723 **T** System and method for determining computer access with electronic payment mechanism
- 5 7,143,337 **T** Apparatus and accompanying methods for network distribution and interstitial rendering of information objects to client computers
- 6 7,120,235 **T** Method and apparatus to provide pay-per-call performance based advertising
- 7 7,107,335 **T** Network access control device through fast recognition of application frames
- 8 7,089,209 **T** Method for revaluing a phone card
- 9 7,025,255 **T** Application service provider and automated transaction machine system and method
- 10 6,990,630 **T** TECHNIQUE FOR IMPLEMENTING BROWSER-INITIATED USER-TRANSPARENT NETWORK-DISTRIBUTED ADVERTISING AND FOR INTERSTITIALLY DISPLAYING AN ADVERTISEMENT, SO DISTRIBUTED, THROUGH A WEB BROWSER IN RESPONSE TO A USER CLICK-STREAM
- 11 6,978,252 **T** Method and system for transacting with network traffic
- 12 6,945,457 **T** Automated transaction machine
- 13 6,944,667 **T** Multi-media remote data access terminals and system

<http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fmeta...> 5/6/2007

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nonexdix D

- 14 6,907,476 **T** Open network system and method for I/O operations with non-standard I/O devices using an extended open network protocol
- 15 6,880,123 **T** Apparatus and accompanying methods for implementing a network distribution server for use in providing interstitial web advertisements to a client computer
- 16 6,865,540 **T** Method and apparatus for providing group calls via the internet
- 17 6,850,996 **T** System and method for enabling transactions between a web server and an automated teller machine over the internet
- 18 6,847,998 **T** Apparatus for control and certification of the delivery of goods
- 19 6,807,532 **T** Method of soliciting a user to input survey data at an electronic commerce terminal
- 20 6,801,899 **T** Assistance method and apparatus
- 21 6,785,659 **T** Agent-based technique for implementing browser-initiated user-transparent interstitial web advertising in a client computer
- 22 6,763,336 **T** METHOD OF TRANSACTING AN ELECTRONIC MAIL, AN ELECTRONIC COMMERCE, AND AN ELECTRONIC BUSINESS TRANSACTION BY AN ELECTRONIC COMMERCE TERMINAL USING A WIRELESSLY NETWORKED PLURALITY OF PORTABLE DIGITAL DEVICES
- 23 6,754,641 **T** Dynamic identification interchange method for exchanging one form of identification for another
- 24 6,745,259 **T** OPEN NETWORK SYSTEM FOR I/O OPERATION INCLUDING A COMMON GATEWAY INTERFACE AND AN EXTENDED OPEN NETWORK PROTOCOL WITH NON-STANDARD I/O DEVICES UTILIZING DEVICE AND IDENTIFIER FOR OPERATION TO BE PERFORMED WITH DEVICE
- 25 6,732,178 **T** Forced network portal
- 26 6,704,403 **T** Apparatus and method for ensuring a real-time connection between users and selected service provider using voice mail
- 27 6,694,387 **T** System for enabling smart card transactions to occur over the internet and associated method
- 28 6,688,518 **T** Wall-mounted touch screen information system
- 29 6,687,737 **T** Apparatus and accompanying methods for network distribution and interstitial rendering of information objects to client computers
- 30 6,684,269 **T** System and method for enabling transactions between a web server and a smart card, telephone, or personal digital assistant over the internet
- 31 6,684,197 **T** Method for revaluing a private label card using an electronic commerce terminal
- 32 6,643,623 **T** Method of transacting an electronic mail, an electronic commerce, and an electronic business transaction by an electronic commerce terminal using a gas pump
- 33 6,636,590 **T** Apparatus and method for specifying and obtaining services through voice commands
- 34 6,629,080 **T** Transaction processing method of fulfilling an electronic commerce transaction by an electronic commerce terminal system
- 35 6,625,645 **T** Automatic static to dynamic IP address and DNS address management for remote communications network access
- 36 6,622,124 **T** Method of transacting an electronic mail, an electronic commerce, and an electronic business transaction by an electronic commerce terminal operated on a transportation vehicle
- 37 6,615,183 **T** Method of warehousing user data entered at an electronic commerce terminal
- 38 6,611,810 **T** Store display window connected to an electronic commerce terminal

B-3-2

- 39 6,609,103 **T** Electronic commerce terminal for facilitating incentive-based purchasing on transportation vehicles
- 40 6,609,102 **T** Universal interactive advertizing and payment system for public access electronic commerce and business related products and services
- 41 6,606,605 **T** Method to obtain customer specific data for public access electronic commerce services
- 42 6,606,602 **T** Vending machine control system having access to the internet for the purposes of transacting e-mail, e-commerce, and e-business, and for conducting vending transactions
- 43 6,604,087 **T** Vending access to the internet, business application software, e-commerce, and e-business in a hotel room
- 44 6,604,086 **T** Electronic commerce terminal connected to a vending machine operable as a telephone
- 45 6,604,085 **T** Universal interactive advertising and payment system network for public access electronic commerce and business related products and services
- 46 6,601,040 **T** Electronic commerce terminal for wirelessly communicating to a plurality of communication devices
- 47 6,601,039 **T** Gas pump control system having access to the internet for the purposes of transacting e-mail, e-commerce, and e-business, and for conducting vending transactions
- 48 6,601,038 **T** Delivery of goods and services resultant from an electronic commerce transaction by way of a pack and ship type company
- 49 6,601,037 **T** System and method of processing credit card, e-commerce, and e-business transactions without the merchant incurring transaction processing fees or charges worldwide
- 50 6,549,889 **T** Assistance method and apparatus
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	Next List	Top	View Cart	
Home	Quick	Advanced	Pat Num	Help

B-3-3



Table of Contents

REPORT

INTRODUCTION and EXECUTIVE SUMMARY

Riding the Internet Coastails
Installed Base
Revenue Projections
Market Sectors

INDUSTRY ACTIVITIES

Public Sector
Public Transportation
Self-Checkout Devices
Web Payphones
Financial Services
Retail

SURVEY RESULTS

Number of Kiosks Installed
Hours of Heaviest Kiosk Use:
All Kiosks
Number of Users per Day:
All Kiosks
Number of Users per Day:
North America
Number of Users per Day:
Europe
Number of Users per Day:
Pacific Rim
Number of Users per Day:
Rest of the World
Average Time Spent at the Kiosk
Cost per Kiosk
Cost per Unit-North America
Cost per Unit-Europe
Cost per Unit-Pacific Rim
Cost per Unit-ROW
Peripherals Used in Kiosks
Kiosk Pointing Devices
Kiosk Payment Acceptors
Online Language Populations
Internet Access Devices:
Per Minute Charges
Free Sites
Usage Patterns
Remote Monitoring Software
Service Providers
Consumables Providers

our reports

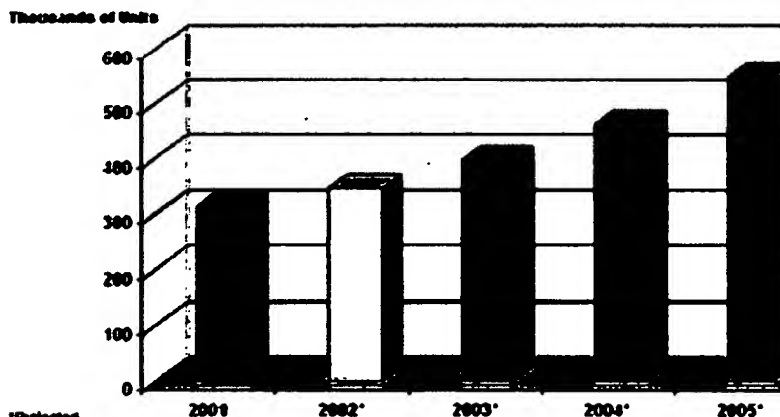
Kiosks and Internet Technology

Totally re-written in 2002, this report is the most comprehensive ever produced on the kiosk industry. Based upon an unprecedented response to an extensive survey and follow-up research, it provides Internet kiosk installed base and revenue projections from the present time through 2005. The nearly 500-page report includes 35 charts and tables, examines trends on the leading kiosk issues of the day and offers many additional looks at the future of this fast-growing industry.

The report defines Internet Kiosks as traditional kiosks whose data is Web-based and whose customers use a proprietary or commercially available easy to use "browser wrapper" to access that information. The report no longer separates public Internet access devices, also known as Web Payphones, into a unique category. These are public terminals where users pay for each minute of connect time to conduct a wide variety of activities, including general Web surfing, e-mail, and e-commerce. In increasingly rare cases, advertisers absorb online costs, thereby offering free access.

The report provides detailed information on 225 companies in the Internet kiosk industry, discussing the market segments they are targeting (including key customers), their featured applications, the key design and development issues they face, what sets them apart from the competition and other valuable statistics of interest to kiosk, financial and telecommunication professionals. The following chart illustrates the current and projected growth for the industry. While it reflects a slow and steady improvement, it also shows the reality of the past year when many kiosk projects were on hold until the economy begins to recover. Summit believes that 2002 will be a year of re-grouping; the upswing of activity will not begin in earnest until 2003.

Worldwide Internet Kiosk Growth



*Projected

Source: Summit Research Associates, Inc., 2002

The report features company profiles of 225 companies in the Internet kiosk industry, representing 38 countries around the world. Countries included:

Appendix E

B-4-1

22. Peripherals Used in Kiosks
23. Kiosk Pointing Devices
24. Kiosk Payment Acceptors
25. Online Language Populations
26. Internet Access Devices- Per Minute Charges
27. Access to Free Sites
28. Usage Patterns
29. Remote Monitoring
30. Service Providers
31. Providers of Consumables Replenishment
32. Leading Development Issues
33. Leading Design Issues
34. Special Capabilities
35. Future Plans

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B-4-2

Leading Development Issues
Leading Design Issues
Special Capabilities
Future Plans

COMPANY PROFILES

More than 220 companies are profiled.

APPENDIX A Kiosk Questionnaire

APPENDIX B Commercially Available Browser Front-Ends

APPENDIX C ADA Resources

Table of Figures

1. Internet Kiosk Current and Projected Installed Base
2. Internet Kiosk Installed Base, 2001
3. Internet Kiosk Installed Base, 2001-2005
4. Internet Kiosk Installed Base, Percentage Growth 2002-2005
5. Internet Kiosks, Current and Projected Revenues
6. Worldwide Internet Kiosk CAGR, 2001-2005
7. Worldwide Internet Kiosk Market Breakdown
8. 2001 Worldwide Kiosk Industry Market Sectors
9. Number of Kiosks
10. Hours of Heaviest Kiosk Use
11. Average Number of Users per Day
12. Average Number of Users per Day - North America
13. Average Number of Users per Day - Europe
14. Average Number of Users per Day - Pacific Rim
15. Average Number of Users per Day - Rest of the World
16. Average Time Spent at the Kiosk
17. Overall Cost per Kiosk
18. Cost per Unit - North America
19. Cost per Unit - Europe
20. Cost per Unit - Pacific Rim
21. Cost per Unit - ROW

are:

Argentina
Australia
Austria
Belgium
Brazil
Canada
Chile
Denmark
Finland
France
Germany
Greece
Hong Kong
Iceland
India
Ireland
Israel
Italy
Korea

Luxembourg
Mexico
New Zealand
Peru
Philippines
Portugal
Russia
Scotland
Singapore
Slovenia
South Africa
Spain
Switzerland
Taiwan
Thailand
The Netherlands
Turkey
United Kingdom
United States

Some of the 225 companies profiled in the report include:

Abuzz Technologies
Apunb
Arral Industries
Avanzit Tecnologia
BluePoint Technologies
CatEye9
Connecto
Cyberdeck
Cybertotems
Data Asia Technology
Datatrax Multimedia Systems
ELO Touchsystems
Epoint Ltd
Frank Mayer & Associates
Friendlyway
High Technology Solutions
Horizon USA
IBM
Jentro AG
Kioscosnet
Kiosk Information Systems
Korea Data Network
Kudos Development Group
Marconi Interactive Systems
MontegoNet
Myriad Communications Ltd.

Nanonation
NCR
NeoProducts
Netkey
NetNearU
NetShift
Netyou
Olea
Papetaco
PFLS
PIX Corp.
Pixel Magic Imaging
PowerPhone Network
St. Clair Interactive
SeePoint Technology
Sriren Multitech, Ltd.
Streak Technology
TELeasy
Telweb
The Kiosk Factory
TouchPoint Technologies
Triplot Ltd.
ULTIMedia
WebHighway
WebPoint
Wincor Nixdorf

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B-4-3



APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

Title: On-line Communications Terminal/Apparatus
Group Art Unit: 2743

Examiner: Stella Woo

**CORRECTED CLAIMS AMENDMENT TO RCE SUBMITTED ON OCTOBER
25, 2006**

<p align="center">CERTIFICATE OF MAILING</p> <p>I hereby certify that this correspondence is being deposited on <u>11-27-06</u> with the US Postal Service with return Receipt requested. The envelope was addressed to: Commissioner of Patents and Trademarks, Mail Stop RCE P.O. Box 1450 Alexandria, VA 22313-1450</p>

Commissioner of Patents and Trademarks,
Mail Stop RCE
P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In response to the notification of **Non-Compliant Amendment** (37 CFR 1.121) the applicant submits the following corrected Claims Amendment. Because box 4 was checked on PTOL-324, only the corrected Claims Amendment is being provided. No fees are due since the applicant submitted the required fees with the Request for

Continued Examination on October 25, 2006

Sincerely,

B-5-1

APPN: 09/134,831 (Reissue)

Filed: August 17, 1998

Appellant: Richard P. Mettke



Richard P. Mettke

7921 Panary Court,

Reynoldsburg, OH 43068

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D-5-2



APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

**CORRECTED CLAIMS AMENDMENT TO RCE SUBMITTED ON OCTOBER
25, 2006- 09/134,831 (Reissue)**

Current Status of amendments. The present claims are based on an amendment filed April 17, 2000 in response to the non-final Office action mailed August 25, 1999 and an amendment filed on December 11, 2001.

Present Claims:

6. A public on-line, pay-as-you-use communications terminal comprising a housing, wherein the housing contains:
- a central processing unit (CPU);
 - a telephone access node;
 - an internal modem coupled to the CPU and telephone access node;
 - a video display monitor coupled to the CPU;
 - a keyboard for providing user interface coupled to the CPU;
 - a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;
 - means for accessing the Internet and allow for user interaction;
 - software installed into the CPU to allow interface with the Internet and credit card service centers; and
 - a printer coupled to the CPU.
7. The terminal of claim 6, wherein the means for accessing includes a touch screen interface attached to the monitor and further includes a touch screen means for accepting input information from the touch screen interface and modifying program execution accordingly terminal which communicates and controls a microprocessor.

B-5-3

8. The terminal in accordance with claim 6 also including, within said housing, program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. The terminal of claim, wherein the housing includes further including a durable enclosure for the CPU, monitor, internal modem and printer, and a secured access door for service and repair.

RCE Amended claims

Cancel Claims 7-9

Amend claim 6 as follows:

6. (Currently amended) A public on-line, ~~pay-as-you-use communications~~ Internet terminal comprising ~~a housing, wherein the housing contains:~~

a central processing unit (CPU);

~~a telephone access node;~~

~~an internal modem coupled to the CPU and telephone access node;~~

a video display monitor coupled to the CPU;

a keyboard for providing user interface coupled to the CPU;

a credit card reader swipe device coupled to the CPU for ~~accepting payment by a user for use of the~~
~~terminal;~~

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

7. (Cancel) The terminal of claim 6, wherein the means for accessing includes a touch screen interface attached to the monitor and further includes a touch screen means for accepting input information from the touch screen interface and modifying program execution accordingly

B-5-4

terminal which communicates and controls a microprocessor.

8. (Cancel) The terminal in accordance with claim 6 also including, within said housing, program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. (Cancel) The terminal of claim, wherein the housing includes further including a durable enclosure for the CPU, monitor, internal modem and printer, and a secured access door for service and repair.

B-5-5



Expedited Procedure

APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

Title: On-line Communications Terminal/Apparatus
Group Art Unit: 2743

Examiner: Stella Woo

Request for Continued Examination

<p align="center">CERTIFICATE OF MAILING</p> <p>I hereby certify that this correspondence is being deposited on <u>10/25/06</u> with the US Postal Service with return Receipt requested. The envelope was addressed to:</p> <p align="center">Commissioner of Patents and Trademarks, Mail Stop RCE P.O. Box 1450 Alexandria, VA 22313-1450</p>

Commissioner of Patents and Trademarks,
Mail Stop RCE
P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In accordance with Code of Federal Regulation 37, section 1.114 and the Code of Federal Regulation 37, 41.50, I am filing a Request for Continued Examination (RCE). As a small entity, enclosed is a payment in the amount of \$395.00 as prescribed in the USPTO fee schedule as required for this action. This RCE is being filed within the prescribed two month time period requirement set forth under 37 CFR 1.1.36 (a) (1) (iv) 2004, which would be no later than October 31, 2006.

B-6-1

Reference is made to the Board of Patent Appeals and Interference (BPAI) ruling affirming the patent examiner rejections (BPAI appeal No 2006-0625, date August 31) of 35 U.S.C. § 103(a), as well as the BPAI finding additional items for rejection of obvious under 35 U.S.C. § 103(a). New and additional arguments for patentability are provided below. Because this is a reissue and reexamination action, it should be considered a special and expedited procedure.

I. Claims Amendment

Please amend my claims as follows:

Cancel Claims 7, 8 and 9

Amend Claim 6 as follows:

6. (Amended) A public on-line, pay-as-you-use Internet terminal comprising a:
a central processing unit (CPU);
a video display monitor coupled to the CPU;
a keyboard for providing user interface coupled to the CPU;
a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;
means for accessing the Internet and allow for user interaction;
software installed into the CPU to allow interface with the Internet and credit card service centers;
and a printer coupled to the CPU.

II. Summary of the BPAI Ruling:

The rejection of claims 6-9 under 35 U.S.C. § 103(a) by the Examiner were sustained by the BPAI. The rejections were affirmed in essence, because it was determined by the

BPAI that the applicant provided no reason why one skilled in the art would not have been motivated to combine the prior art references provide Internet access. The examiner (and BPAI) determined that one of ordinary skill in the art would have been motivated to provide Internet access as an additional pay-for-use service in the public kiosks of Exhibit E (attachment C) and F (attachment D) based on the teachings of Shah (exhibit D- Attachment A). Shah was relied upon for its teaching of Internet access via a kiosk. In addition the BPAI found additional New grounds of rejection have been entered as to claim 9 under 35 U.S.C. § 112, fourth paragraph, and as to claims 6-9 under 35 U.S.C. § 103(a). The applicant's arguments concerning the BPAI rejections are discussed in section IV.

III New Arguments based on the Examiners final rejection and BPAI appeal decision

Just to be clear, the rejection (35 U.S.C. § 103(a)) of the applicants reissue is based on the combination Exhibits E & F (attachments C&D) and based on the teaching of Shah (Attachment A). The additional rejections by the BPAI will be addressed later in this document. Applicant will not directly address the combination of prior art discussed above since the new argument is that the Shah abstract teaches away from accessing the Internet.

A key point here is that the examiners (and BPAI) decision was based on the Shah reference teaching accessing the Internet (in combination with Exhibit E- Attachment C & Exhibit F-Attachment D). "Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract)"

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B-6-3

The Applicant maintains and will demonstrate that the Shah teaches away from accessing the Internet. And hence should not be used as a prior art rendering the applicants application as obvious in combination with exhibits E& F. The applicant maintains that the both the Examiner and BPAI misinterpreted or misread the Shah abstract. The Shah abstract does not teach accessing the Internet. It teaches away from accessing the Internet. The applicant will demonstrate this in the following analysis of the Shah Abstract.

Analysis of the Shah abstract-

Summary- The Shah abstract teaches using a World Wide Web type "interface" (or browser)(**Emphasis added**) as part of an information kiosk system. Below is a "cut-and-paste" of the Shah relied upon abstract paragraphs with an interpretation and comments.

The first paragraph calls out the systems that he is referencing are "kiosk based"

- ° The second paragraph talks about how the Internets World Wide Web has provided the internet with easy interface (**emphasis added**)
- ° The third paragraph talks about the requirements that that an information kiosk system based upon the World Wide Web must have. Hence, it talks about a Kiosk-based information system based upon the World Wide Web in the context of a type of user interface (**emphasis added**) to be used in another application, not accessing the Internet.
- ° Another key point

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

World Wide Web has provided the Internet with an easy interface superceding access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Below is a cut-and-paste of the Shah "Introduction" in the relied upon abstract.

- Again, in the introduction Shah talks about user-friendly interfaces. He means the design of the World Wide Web interface; the browser (not accessing the Internet).
- Another key point in understanding the abstract is Shah's reference to Kiosk-based Information systems, not Internet based or accessible. Explicit that they are not connected to the internet, nor suggest it.

Introduction

Kiosk-based Information system has many requirements to create the most-user friendly interface while maintaining security and functionality. *User friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

Below is a cut-and- paste of the next Shah abstract paragraph.

They key to understanding/interpreting this paragraph is in the first paragraph.

Shah asks the question is why one would use the World Wide Web as a design for a

kiosk-based information system. Key points are World Wide Web as a design

(emphasis added) and for a Kiosk- based information system. Not Internet access.

He goes on to talk about how the web and its capabilities (reference to the Browser or interface) are a standard on the Internet.

When he is talking about the Web, he clearly is talking about the Web and it's user

B-6-5

interface. This paragraph has the only mention of the Internet in Shah's abstract. And it is only in the context of the Web (Browser) and its success on the Internet, not accessing the Internet

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Below is a cut-and- paste of the next Shah abstract paragraph.

Shah talks about interest in the World Wide Web. Then he goes on to talk about the various browsers. In context, he is talking about the functionality of the browsers. Not interfacing or accessing the Internet. And then he goes on to talk about who may have an interest in a "kiosk based" information system (emphasis added).

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example hotels, amusement parks, shopping malls, etc.

B-6-6

- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organization who wish to provide a paid service through kiosks

Below is a cut-and-paste of the next Shah abstract paragraph.

Here Shah talks about the recommended user interface of the Browser.

User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage session's counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. If this were indeed an Internet accessible system, there would be no need for servers. He talks about connecting to a network and stand-alone systems with no network interface. So, at the most what he discusses is a Local Areas Network (LAN). Emphasis added. Not accessing the Internet (Emphasis added).

The Server.

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

B-6-7

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about

servers. This is probably the most important paragraph in my claim that the Shah

abstract teaches away from accessing that the Internet. Here is where he talks about the

functionality of the kiosk- based Information system that he describes. Again, he talks

about servers networked (LAN) providing the information. Not the Internet. If the

system had functionality with the Internet it would have been in this paragraph.

Functionality

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. Her Shah talks about storage of data and associated problems. If this were Internet based or assessable this would not be an issue. He also talks about a the problems associated with local Kiosks (not networked)

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual

computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about

security. Shah talks about security of stand-alone and networked systems

Again, when networked, it's a LAN. When standing alone all information is contained on the Kiosks. No mention of Internet access or interface.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIXC, VMS, etc, operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often.... (Article cuts off here. But irrelevant...)

No comments on the last paragraph.

Control

Control involves the access to the Server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied is very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific access to documents or services. The concept of registered users and billing may be built in to the server.

In summary, the Shah abstract teaches using the World Wide Web "interface design"(browser) on a stand-alone (local) or networked (LAN). Therefore, it clearly teaches away from accessing the Internet. As the Shah prior art was the main reference that examiner (and BPAI) decided was rendering the applicant application obvious (because it teaches accessing the internet), when combined with Exhibits E and F. The Shah abstract does not teach, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. The analysis provided above clearly demonstrates this fact. The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action and appeal brief to the BPAI. Because of the amended claims, the applicant does not discuss the rejections directed towards the other claims.

IV Arguments based on the BPAI rejections

The BPAI found additional grounds for rejection. Claims 6-9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

The BPAI also concluded that the following references were prior art:

B-6-9

- TOUCHFAX AMERICA, video tape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex in Atlanta, Georgia, 1993 TouchFax Information Services, Inc., (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA).
- Deposition of Daniel Toughey in Mettke v. TouchNet, No. CV-98-PT-596-E, pp. 40-53, discussing Exhibit 5 to deposition, Pages 40-53
- TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).
- Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).
- VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).
- Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA) (hereinafter "L&G ISDN console").
- Paul Gilster, The Internet Navigator (2d ed. John Wiley & Sons, Inc. 1994⁶), pp. 15-18, 24, 25, 56, 57, 195, 221-225 (hereinafter "Internet Navigator").
- Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. cover, index (2 pages), 82-84 (hereinafter "Aliens").
- On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis (hereinafter "On Haiti").

B-6-10

Prior Art Discussion:

The applicant disagrees that "TOUCHFAX AMERICA, video tape recorded May 14, (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA)" is prior art. The video tape is clearly a concept, experimental, an idea and marketing tool. Not permitted in prior art. The examiner rightfully excluded it in an Office Action dated August 24 1999, page 8, 3rd paragraph". Although Exhibit C, 4 shows a frame from the video tape of exhibit C advertising connection to the Internet, it was stated in the deposition Daniel J. Toughey (attachment, pages 14-15) that the terminal shown in the video tape did not actually enable a user to gain access or interface with the Internet. This alone should have negated its use as prior art. The applicant also disagrees that TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest) is prior art. In his deposition (attachment I, page 22 & 98), Mr. Toughey states specifically that in 1991 (the time the document was distributed), the terminals did not have access to the Internet, Prodigy and CompuServe. Again, a concept, experimental, an idea and marketing tool. Not permitted in prior art. This alone should have negated its use as prior art. Probable utility does not establish practical utility. Because the applicant has amended the claims, he will only address those rejections that are related to the amended claim 6.

The BPAI rejected claims 6-9 under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

B-6-11

The BPAI states that in Exhibit E it states that "The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (page 31, line 16 of BPAI decision) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax terminals to provide public online services and public Internet access as those features became common at home and business."

The applicant does not understand how this is a "suggestion to modify" a TouchFax terminal to include Internet access and interface. The only suggestion would be if they (Touchfax) saw the applicant's disclosure and added this capability to their terminal. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of his deposition, June 16, 1998 , no Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15, 44). This is three and a half years after the applicant's disclosure on January 23, 1995. This clearly points to nonobvious and demonstrates a lack of suggestion, teaching or motivation.

The BPAI suggests that the motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all of the exhibits are from the same corporation, TouchFax, and expressly teach modifications.

The applicant respectfully disagrees that there is motivation to combine Exhibits C, D, E, and F and that they expressly teach the modifications to add Internet access and interface on a point-of-sale basis. The BPAI does not "show" objectively how the references teach this modification other than seeing the applicant's disclosure in January 1995.

Mr. Massey's statements that they (exhibits E & F) have the capability to expand or modify the terminal applications to "meet customers needs" are indefinite and probable. Of course he is going to say this when he is under going a litigation deposition. There is no corroboration of his statements. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access or interface with the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of the deposition, June 16, 1998, no Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15,44). This was three and half years after the applicant's disclosure and clearly points to **unobviousness**.

I would like to point out that there are distinct and clear difference's between Commercial On-line Services (AOL, Prodigy, CompuServe,etc) and the Internet. The BPAI has for the most part adequately defined them. I shall not repeat the descriptions here.

I will take exception to their interpretation of access (and interface; which was not addressed in the email analysis) to the Intranet. The BPAI stated that because some of the Commercial On-line services provided the email provided access to the Internet via e-mail. The board stated on page 47 (BPAI decision), that the claims recite access to the Internet are met by access to one service on the Internet, such as e-mail. The board also states that email through a Commercial On-line service provider that uses the Internet to send qualifies as "access to the Internet". What about interface?

The applicant respectfully disagrees that accessing on-line service providers qualify as Internet access and interface. Claim 6 states "accessing the Internet " as well as

interfacing with the Intranet. My claims do not say that you have to go through the method of point A (commercial on-line service) and B (send an email) and then point C email goes through the back office on-line service propriety architecture and may or may not be sent over the Internet. Clearly the claims in 6 say access and interface with the Internet. You either have access and interface or not. This an area that the applicant feels is clear a case of blue printing by the BPAI; using my disclosure to put together pieces of prior art to teach my claims.

On Haiti describes that "Cyberia' -- a 'cyberspace cafe' --has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour."

On Haiti has 26 words in the article. There is not enough information to assess this prior art. There is not enough detail that discloses the structure, interface, and processes for this reference to be applied as prior art. Let alone suggesting, teaching or showing motivation to combine. Regardless, the BPAI has not provided any clear specific evidence to support the combination or modification as they suggest.

The Landis & Gyr, ISDN console, Public telephone and telematic console. The examiner had reviewed; this relied upon prior art by the BPAI. In an Office Action Summary, dated August 24, 1999, the Examiner stated on page 8- 9, "they lack certain elements in the claims, such as a printer, touch screen interface and Internet access." Hence it was not relied on prior art. The applicant agrees.

The scope of the invention Arguments

The BPAI defined the applicant's field of endeavor as a pay-per-use public communication terminal, and the particular problem with which the invention was concerned with was

B-6-14

providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals. The BPAI also said the references were within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access and interface or as pay-as you-use application.

The applicant respectfully disagrees that the terminals listed above (Exhibits C, D, E, F, L&G ISDN console) are within the field of endeavor (nor are they pertinent) to the matter at hand. They are not analogous art. None solve the problem of accessing the Internet or interface as the applicant's claims represent. If the terminals accessed the Internet (the problem that the applicant solves), allowed for interface on a point-of-sale basis, then they may have been pertinent and relating to the applicants filed of endeavor. The BPAI use of Public Communications terminal is too broad as a field of endeavor. Communications relates to many sub areas, facsimile machines, telephones, televisions, cellular phone and global positioning systems just to mention some of the areas.

The BPAI brief states" Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet.

B-26-15

It has been proven by statements in a deposition by Mr. Toughy, (Attachment I, pages 14-15,44), that the terminal in Exhibit C did not access or interface with the Internet. That the tape was a vision or concept. Also, in his deposition he stated that as of the date of the deposition (June 16, 1998), 3 ½ years after the applicants disclosure, that the referenced Touchfax terminals still did not have the capability to access and interface with the Internet as in the applicant's claims. So, how could it be a later improvement as stated by the BPAI? Applicant fails to see how exhibit C "demonstrates" that the terminal "can" be built. Particularly when the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet, as previously mentioned in his deposition as late as June 1998. Furthermore, the applicant fails to see any objective or specific reasons provided by the BPAI as to how exhibits C, E and F show motivation to add Internet access and interface. Again, the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998 and exhibit C was a marketing tool and concept. Probable utility is not practical utility.

The BPAI brief states that" Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the **express** suggestion to modify Exhibits E and F to provide access to online service providers.

Regardless of the BPAI interpretation of what qualifies for Internet access, the *Internet Navigator* clearly points out, on-line service providers are not the Internet (page 57). As previously discussed, Touchfax representatives stated (in a deposition) that in 1991, the

B-6-16

date of the publication, that they did not have access to on-line services such as Prodigy and CompuServe. This should have negated this document as any type of reference.

The BPAI stated that they approached "the obviousness issue from two directions.

First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we then show why it would have been obvious to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer. Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a videotape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet. Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

B-6-17

On Haiti discloses charging for use of a public computer terminal to access to the Internet.

One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

The applicant fails to see any motivation, teaching or desirability to combine the references as shown; to teach the applicants claims. Nor does the applicant see how one skilled in the art would have been motivated by the BPAI reasoning for obviousness described above. The BPAI states that they are not relying on Exhibit C as a main reference, but ties it in with Exhibits D, E&F and On Haiti. The applicant fails to see how there can be an "express suggestion" to use Exhibit C, D, E & F in a combination to modify. As previously mentioned, Exhibit C was marketing tool and concept, not a capability. The owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998. Also as previously mentioned, Exhibit D did not have the all the capabilities listed on it in 1991, particularly access to on-line services. Exhibit D was simply a concept or idea, a listing of capabilities that that did not exist at the time (1991). This was stated in a deposition by the owner of Touchfax ((Attchmnet I, pages 22&98).

V. Remarks

The BPAI has not shown any objective or specific teaching, suggestion or motivation as to why someone skilled in the art would combine the prior art references to yield what is in the applicant's disclosure, of January 1995, even though they approached the obvious analysis from two different avenues. The applicant clear shows why in this RCE. The applicant feels that the BPAI used the applicant's disclosure to blue print pieces of prior

art to defeat patentability. This has been clearly shown in the above arguments. As demonstrated in the applicant's arguments, the BPAI decision appears to be a discussion of the ways multiple art references can be read on the claimed invention in January 1995.

The BPAI has failed to show any pertinent desirability that would suggest, teach or motivate the combination of the relied on prior art that would produce the results in the applicant's claims, disclosed in January 1995.

The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action and appeal brief to the BPAI, as well as the BPAI rejections of obviousness to issue an allowance.

Sincerely,



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ATTACHMENTS:

B-619

Attachment A- Rawn Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.)

Attachment B- Black and white copies of Exhibits C,1 to C, 6, which are copies of frames from TOUCHFAX AMERICA, video tape recorded May 14, 1993. TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).

Attachment C- Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).

Attachment D- VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).

Attachment E- TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).

Attachment F- Paul Gilster, The Internet Navigator (2d ed., John Wiley & Sons, Inc. 1994), pp. 15-18, 24, 25, 56, 57, 195, 221-225.

Attachment G- Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. 82-84.

Attachment H -On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis.

Attachment I- Deposition of Daniel Toughy in Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed June 16, 1998), Pages 1-3,14-15, 22,44 & 98

Suggestions for Information Kiosk Systems using the World Wide Web

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The World Wide Web Information Kiosks Special Interest Group

30 April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superceding other access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Introduction

A Kiosk-based Information system has many requirements to create the most user-friendly interface while maintaining security and functionality. User-friendliness is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

Attachment A

B-6-21

- a multimedia tool is the primary type of program used by information systems because of the combination of text, graphics and sound are more appealing. The many different Web browsers have these capabilities already.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

"Web Design"

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such kiosks.

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible, or present a failed message if the time to access the document is longer than a certain amount considered as $t = \infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

B-6-22

The following are suggested requirements for an access interface based upon the above suggestions:

• Physical Requirements

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

• User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspaces.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

The Server

There are also suggested requirements for the Server program for these information kiosk systems.

Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintainence. This may be expensive if network connect time charges are expensive.

Functionality

B-6-23

http://www.nra.com/people/rwn/kiosk-paper.html

Functionality of the server is key to its success. The more special functions it serves and the greater the extensibility of the server program, the better its chances of success as a popular system.

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently not a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

40

B-6-24

contain restricted documents but data managers may wish to restrict certain areas of their Webspace dependent upon their own criteria.

Control

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

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URL <http://www.rtd.com/people/rawn/kiosks.html>

B-6-25

PLAY TOUCHFAX:00:08
Information Systems, Inc.
TOUCHFAX AMERICA

IRI: 1:20
WITH MUSIC

Audio: Mono

Recorded: 5-14-93

VPR Creative Group: 01:4

EXHIBIT

C, I

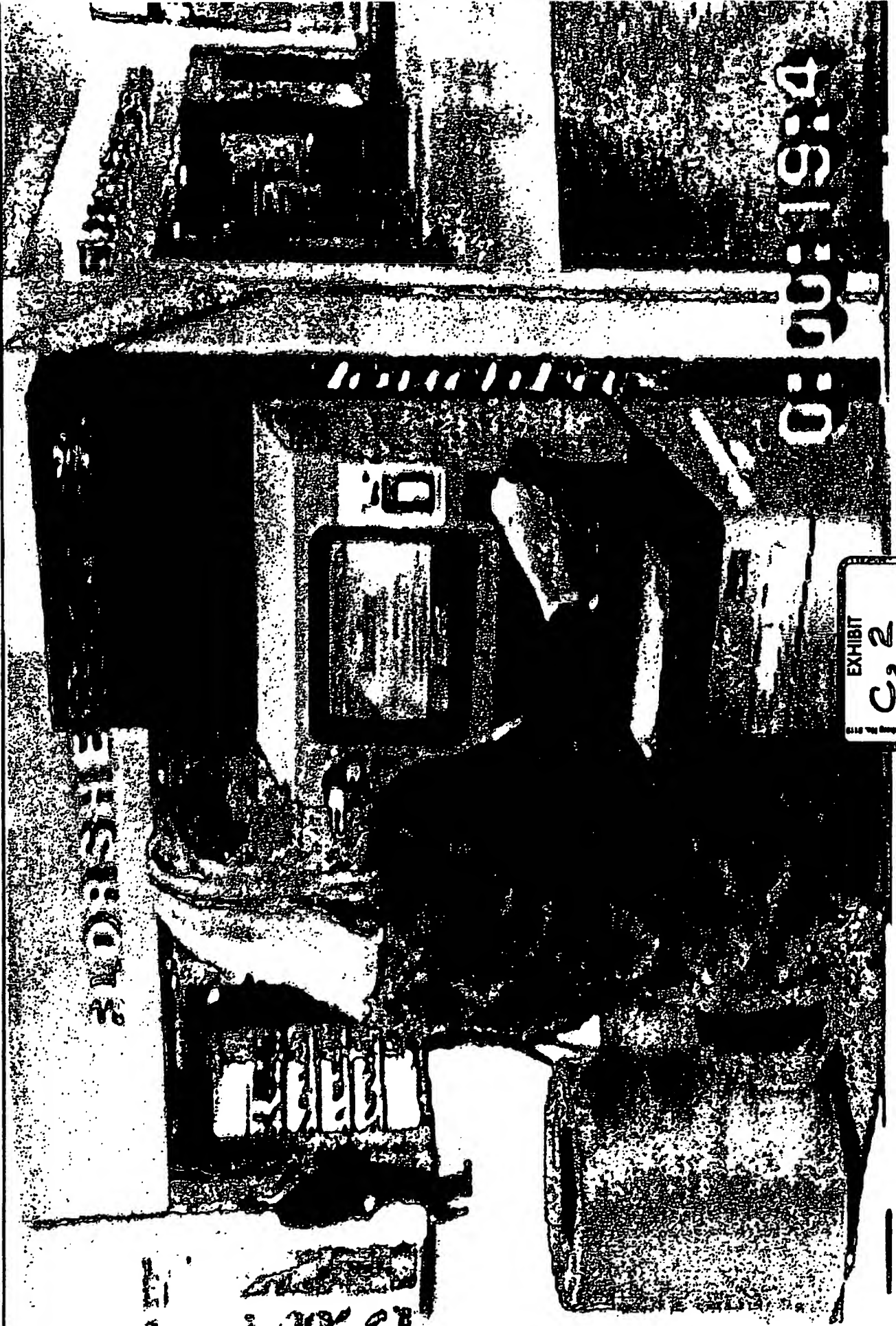


EXHIBIT
C, 2

0:00:19:4

B-6-27

THE UNIVERSITY OF CHICAGO

1990

100-443888-1

10

1

100

Boydell's

1990

11

100

100

1

10

THE UNIVERSITY OF CHICAGO

UNIVERSITY OF CALIFORNIA

EXHIBIT

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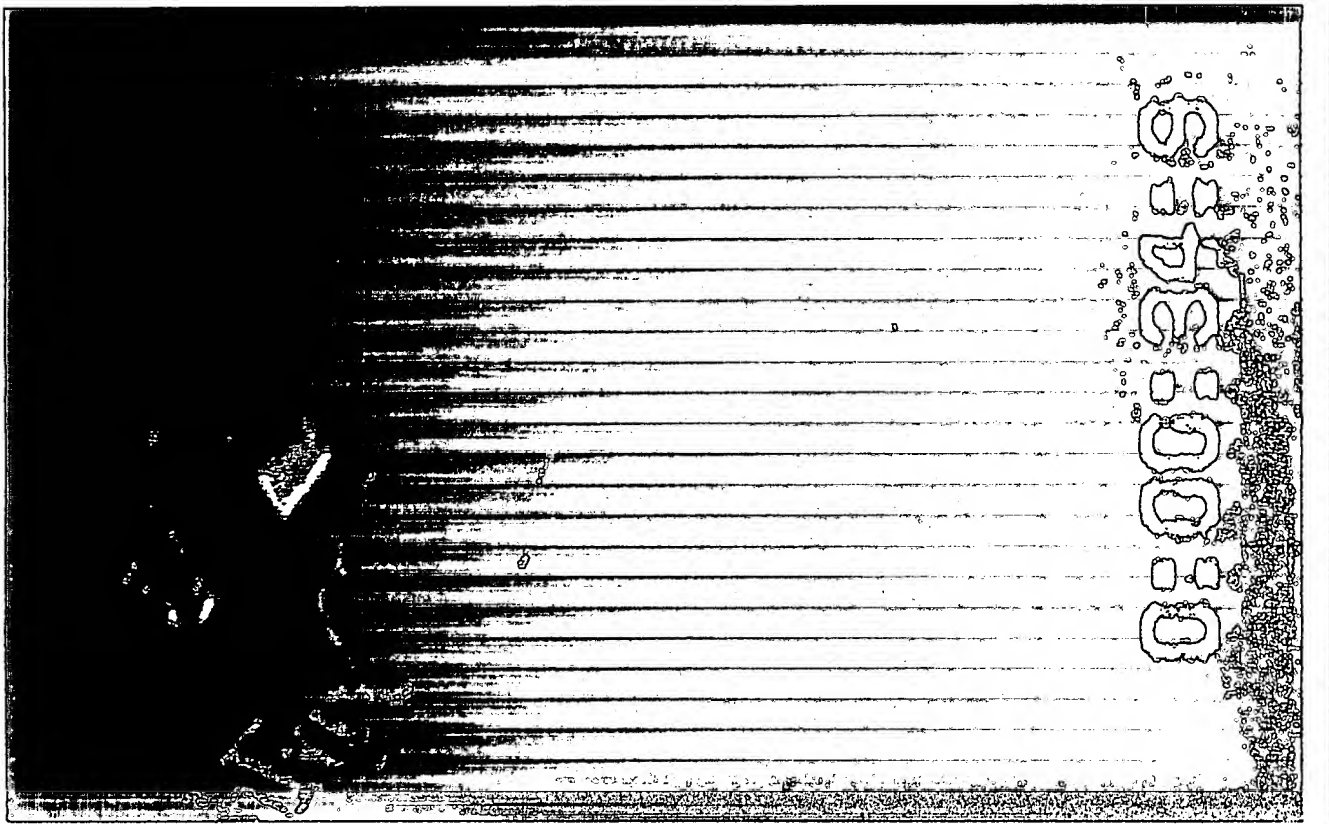
B-6-28

B-6-29

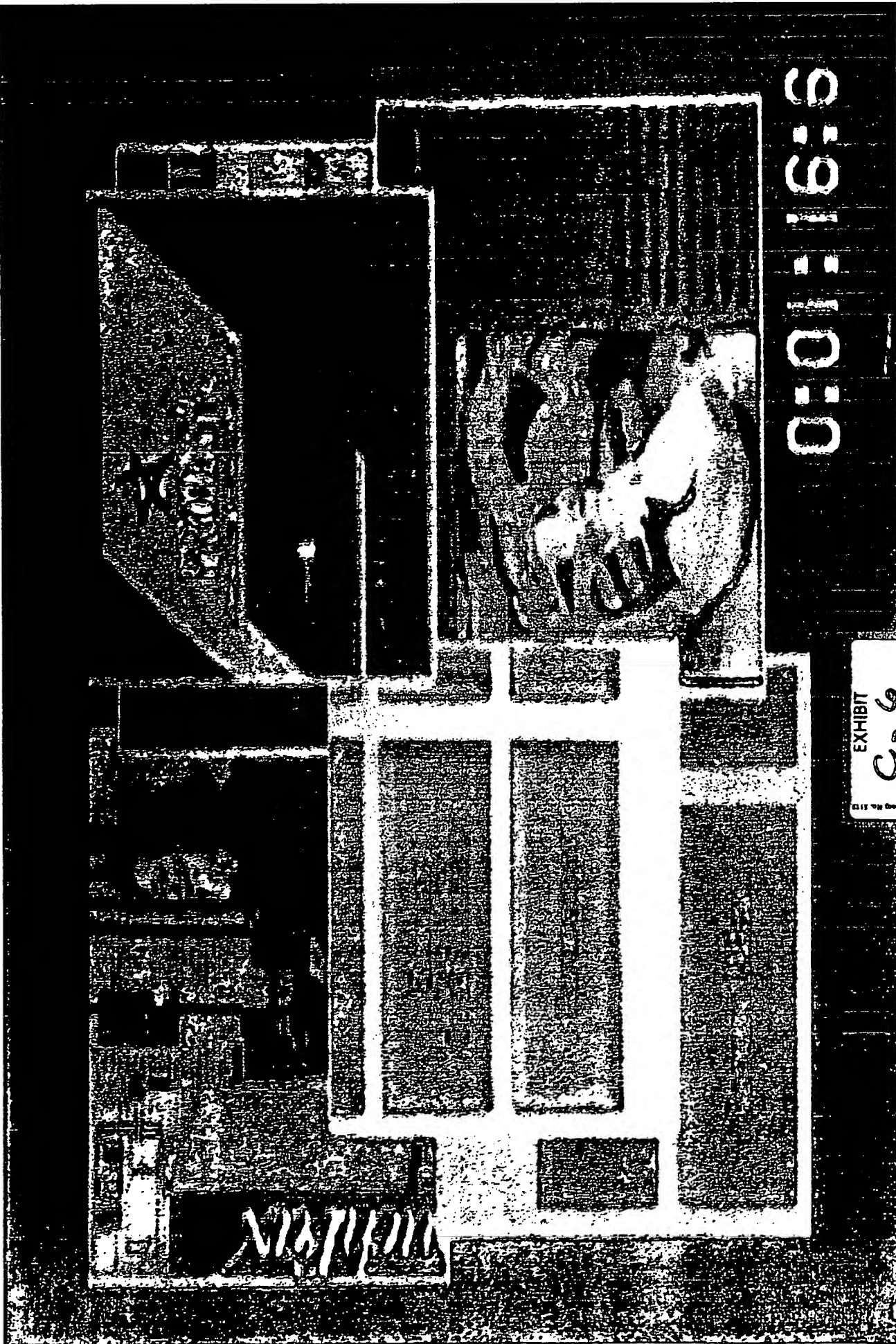
Internet

EXHIBIT
C, 4

940043423



B-6-30



0:01:16:6

EXHIBIT

C-6

B-G-31

TouchFax Provides The Ultimate In Place-Based Interactivity

By Allen Weiner, Editor

If you think of TouchFax Information Services, Inc., as a company that manufactures public fax machines, you have only part of the picture. In the rapidly growing arena of place-based media, TouchFax is creating products that will allow consumers the same sort of interactive capabilities as they will have with their home-based interactive appliances.

"We believe the information for the machine can be strategically designed for the location type so the type of services and the type of information that can be retrieved interactively on our terminals can be totally different from one machine to another," says John Massey, the machine's creator and chairman of the Lenexa, Kan.-based company.

"We always will have a basic set of common services that are available on all machines," he adds. "But, particular machines will have unique sets of advertisements and promotions on them, as well as related services that relate to the type of people that frequent a particular type of location."

And locations are key to the TouchFax family of products. Massey believes they are best utilized in places where "a number of different types of users can interact with their desired and preferred telecommunications service." Airports, hotels, truck stops, apartment complexes and even supermarkets are ideal for these multifunctional, multimedia machines.

TouchFax hardware products include three models of public terminals used initially as pay-per-use fax machines. They also can provide other services such as word processing and high-quality copies in addition to its primary communications capability of phone, fax and computer. Service products include personal fax mailboxes and information services which may be accessed by TouchFax public terminals and any private fax machines.

The TF Series public terminals are location specific and are designed to meet the space in which they will reside. For example, a lower cost unit designed for lower traffic locations also has a smaller paper storage capacity and would require more frequent service calls if placed in a high traffic location.

All TouchFax terminals use proprietary



Best Available Copy

Attachment C 1

EXHIBIT
E

B-6-32

software to create an easy-to-use visual control panel. This user interface to the machine is displayed on a touch-sensitive color video monitor which provides instructions to the user and on-screen buttons to operate the terminal functions.

Documents to be sent are scanned on a jam-proof flatbed scanning device which operates much like a standard copy machine. Payment for services is made by using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping.

"It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

TouchFax's TF750 is a free-standing kiosk with a high-resolution, 14-inch color touchscreen monitor, 386 microprocessor, high-volume laser printer, full-size keyboard and data port for modem and laptop connections. The TF450 is a built-in, wall-mounted unit that has an optional floor mount and offers the data ports for modem and laptop connections on an optional basis. The TF200 is a built-in, wall-mounted unit that offers a laser printer as an upgraded feature.

TouchFax offers two service products which adds to its flexibility—a fax mailbox service and electronic library. The TouchFax Mailbox is a centrally managed electronic service capable of storing fax messages. Mailbox subscribers are given a personal phone number to allow fax messages to be sent to their mailboxes, stored in the mailbox and retrieved at any time. To retrieve stored messages, the subscriber calls his mailbox number, enters a Personal Identification Number, enters the fax destination number and the system forwards the stored fax messages as instructed.

The TouchFax Electronic Library is a collection of information products organized by category. These information products are made available by combining information databases and high-resolution fax printer output with the ease of remote telephone communications. Information products are available on TouchFax public terminals and from any private fax machine.

On a TouchFax public terminal, the touchscreen provides an interactive dialog between the consumer and the information provider. For example, a consumer can select OAG FlightFax to get up-to-the-minute flight information, seat availability and fares. The consumer is guided through a series of video screens requesting their specific flight schedule. The TouchFax public terminal then sends the information via computer modem to OAG's database and a one-page personalized report is delivered to the TouchFax terminal by facsimile.

To access the TouchFax Electronic Library from your home or office requires a touch-tone telephone. A user responds to a series of audio prompts and directs the document to his home or office fax machine. For example, consumers can define the content of an up-to-the-minute special interest newsletter compiled from the news resources of *USA Today*.

Users also can request details of forecasters weather conditions in their destination city, maps and directions to specific locations, as well as city guides with suggestions on where to dine and what to see. Other services are oriented specifically toward entertainment and include popular business book summaries, personalized cartoon fax messages and event schedules.

In essence, TouchFax provides the future interactive appliance user a similar service to what he will be able to access with his Interactive Video Data Service terminal, touchscreen telephone or interactive cable device. So, home or away, the consumer can be interactive.

"The TouchFax is designed to emulate exactly what a person will be able to use in their homes," says Massey. "It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

FREE EVALUATION



Bill Fawcett the producer of the Ricardo Montalban T.V. Infomercial show is now looking for more amazing products for T.V!

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Irvine, California 92718
Fax: (714) 753-7470

READER SERVICE NO. 29

October 1992 • INTERACTIVE WORLD • 49

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Best Available Copy

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VISION...

Leaders see the possibilities before they become obvious. The TF700 is designed with the understanding that the information age is just beginning. It incorporates the latest technology into an integrated system that can meet the communications needs of today and tomorrow.

POWER...

Every leader has a great mind. The "mind" of the TF700 is a powerful hardware/software system engineered to provide a comprehensive set of communication functions. TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location. The TF700 has the additional power to access other computer systems and enhanced fax services like our own InfoTouch™ electronic library.

VERSATILITY...

Leaders stay responsive to changing circumstances. The TF700 is a versatile platform that can adapt to take advantage of new technologies and opportunities, while meeting many present needs.

~~~~~Public Fax has arrived.

The TF700 is the most complete solution to the needs of the rapidly growing public fax market. It provides high quality fax, jam-free operation and plain paper output in a convenient, self-service terminal.

-----Information Access is the key.

The TF700's self-instructing touchscreen interface encourages the general public to utilize the many information databases available.

~~~~~Word Processing is a plus.

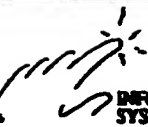
The full-sized keyboard offers the business traveler the perfect solution to composing and printing a letter or even personalizing a greeting card.

.....Video Advertising works.

The TF700's high-resolution color monitor provides a powerful medium to deliver advertising messages. In addition, each video ad screen can be linked to a printed coupon or sales literature that is instantly printed and delivered at the touch of a button.

TF

The Public Communications Terminal
of Tomorrow... For Today's Leaders Today.

TouchFax  **INFORMATION
SYSTEMS, INC.**

15520 College Boulevard, Lenexa, Kansas 66219
Phone: (913) 539-6699 (800) 863-7FAX (8329) Fax: (913) 539-5588

Exclusive European Distributor: Landis & Gyr Communications (Switzerland) Corp.
Grand Pré 78, CH-1211 Geneva 18
Tel.: 022 733 55 80 Telex: 022 733 52 19 Tlx: 751 703

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B-6-35

TouchFax

The demand for public communication services is growing. Many of the world's leading telecommunications companies in the world have seen the opportunity on the wall. Several industry leaders have already responded by selecting TouchFax as their product of choice.

In the new TF700, TouchFax has combined precision engineering and powerful functionality to create the industry's most advanced personal communication center. At the touch of a few buttons, the new TF700 can put anyone in touch with the world through an extensive menu of services including:

telephones, send or receive faxes, photocopying, word processing, and laser printing, and access to a growing network of information databases from Wall Street news to international sports scores.

Handset and Hookswitch are AT&T quality, delivering high performance and durability.

External Speaker provides clear audio feedback of busy signals, fax tones, or voice prompts.

Access Door provides convenient access to internal components, extra paper and supplies.

Ergonomically designed cabinet provides easy access to controls and a clear view of the screen.

TF

Public Communications Terminal



TouchFax TouchScreen Monitor provides a full-size screen and displays information and controls in large, legible characters.

Control Panel features a numeric keypad and function keys for easy operation.

Full-sized Keyboard controls the computer, database access, fax, word processing, and prints when not in use.

Optional Features include a floppy disk drive, special card reader, laptop or modem connections.

300-DPI Flatbed Scanner delivers high resolution with low-cost, electronic file storage.

Optional Features include a hard disk drive, a serial interface and integrated fax and data-modem capabilities.

300-DPI Laser Printer offers crisp, high-resolution printing on plain paper and an optional 700 sheet paper tray.

Compact Footprint of just 24" W X 28" D lets the TF700 fit in almost anywhere.

TouchFax is a registered trademark. © 1991 TouchFax

Touch

The Leader in Public Communications Systems

Now the information age is for everyone. The TF700 provides a friendly, touchscreen window to a universe of information available from on-line computer and fax information services. Never before has the public had easier access to such a wide range of printed information.

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Attachment D-

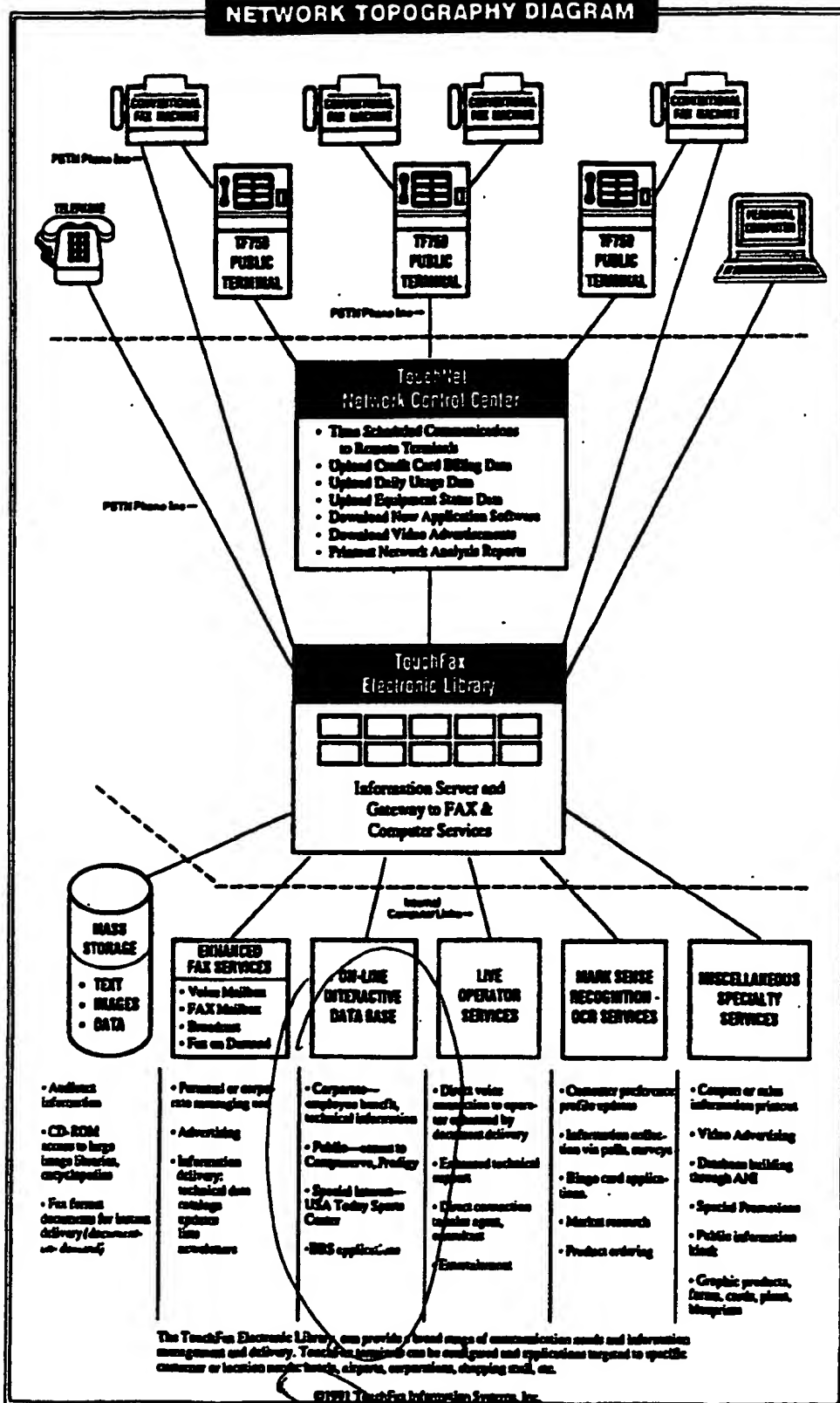
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TouchFax

NETWORK TOPOGRAPHY DIAGRAM



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ATTACH

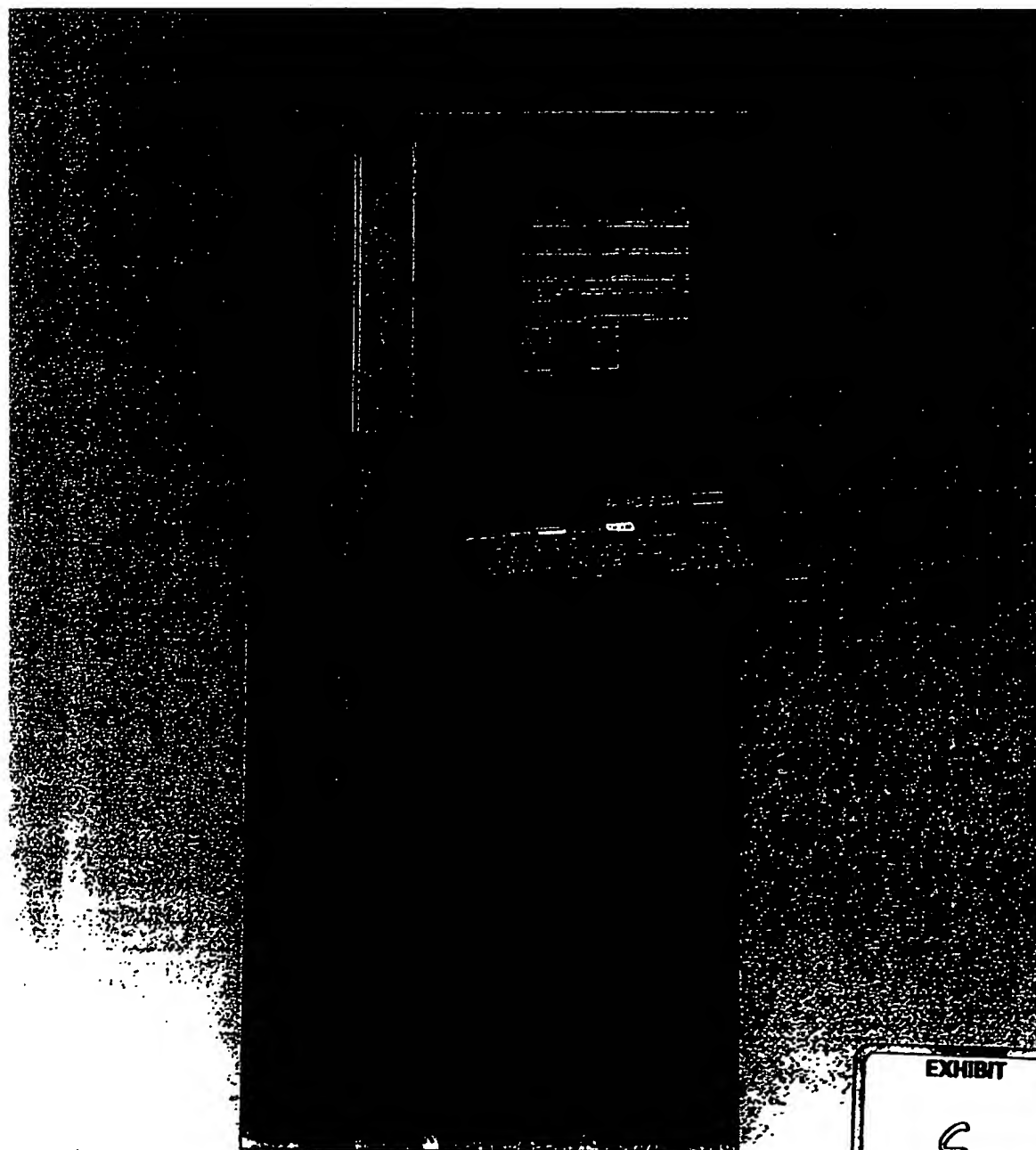
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Attachment E

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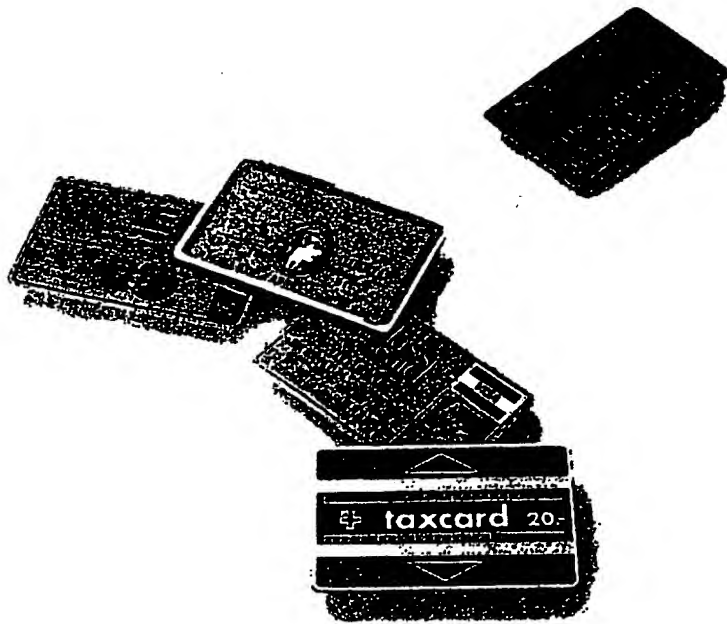
ISDN console

Public telephone and telematic console



Attachment F -

B-6-39



- Access to various new services and information sources
- Possibility of accessing a system operator specific data base
- Practical means of payment by means of cards
- Possibility of connecting a portable computer

Motivated by its policy of continuous innovation in telephone equipment, Landis & Gyr presents an advanced public telephone and telematic console, which illustrates the extensive range of services offered and whose role is to promote modern means of communication in crowded public places.

The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal.

Means of payment

Any of the main types of cards currently in use may be employed, namely:

- The Landis & Gyr optically coded pre-paid value card,
- The -smartcard- (card with microprocessor chip) or
- The commercial magnetic credit card

For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.

Multiplicity of services offered

New services are offered to the user:

- Consultation of Videotex type data bases on the colour screen
- Possibility of connecting a portable personal computer to the telematic console by means of a special infrared connector, thus providing the possibility of accessing specialized data networks.
- Increased help for the user by the display of instructions and menus on the screen, presented interactively and clear identification of the selections by means of special coloured keys.
- Digital telephone, providing a quality that is superior to that of a conventional analogue telephone together with a shorter time for putting the call through.

Videotex

The user has no difficulty in accessing the Videotex services available to the general public (also called Minitel, Prestel and Bildschirmtext, depending on the country).

These services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour.

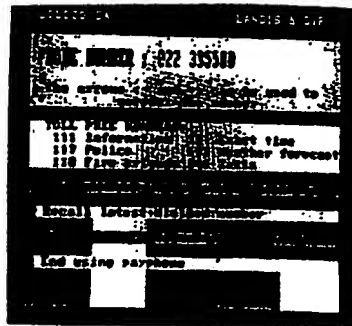
The various services already available include:

- Electronic telephone directory
- Electronic mailbox
- Telex transmission

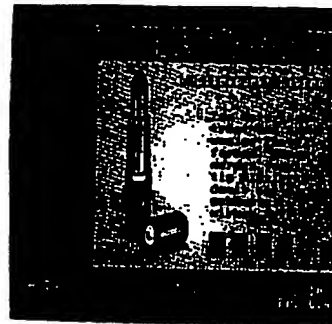
B-6-40

B-6 41

- Timetables of means of transport
- Reservation of seats with certain airlines
- Reservation of hotel rooms, hire cars, places for cultural and sporting events
- Teleshopping
- Telebanking



Main menu — a colour is attributed to each choice; pressing the key of the same colour on the keyboard causes selection of the desired function



The Videotex standard enables pages with a high degree of graphics to be created.



Data base specific to the system operator

In addition to the Videotex data base, the user also has access to a specific data base, restricted to the users of Landis & Gyr ISDN consoles. This private data base, when it is installed, offers services restricted to a definite geographic region,

for example: nearest chemists, street directory, proposed route to reach a given address, nearest bus stops, etc.

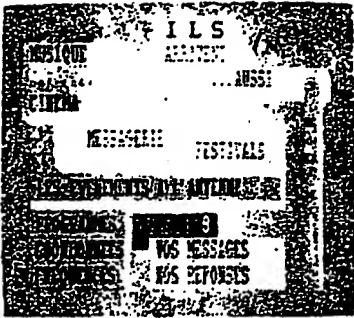
An easily used source of local information is thus available to travellers and tourists.

Use of a portable personal computer

The Landis & Gyr ISDN console makes it possible to link up to a computer centre from a public place.

The services accessible from a portable personal computer are those that are currently accessible via the specialized data networks, termed packet switching networks or type X.25 networks.

B-6-42



Page for accessing the Videotex server of a local radio station

the system operator at a distance and then loaded via the network. They may include a high proportion of graphics so as to achieve maximum visual impact.

Maintenance

Landis & Gyr has applied the concept of remote maintenance to its ISDN consoles. This concept has already proved its value in the range of conventional telephone stations (BTG Remote Management Systems).

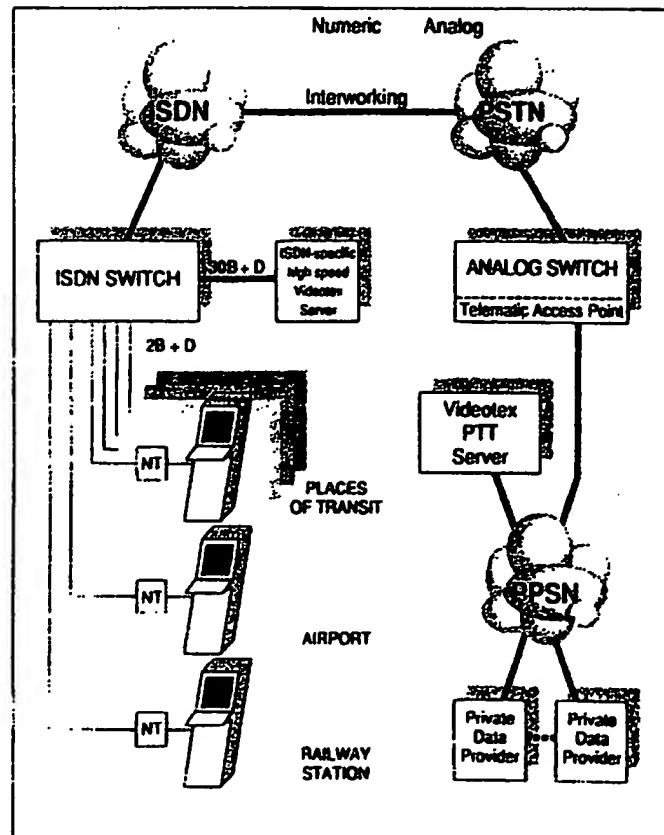
These services may be classified in two categories:

- Link up to a private central computer and use of the portable terminal as a remote terminal to transfer data or carry out any other operation on the central computer (e. g. transfer of the orders obtained during the day, from the memory of a commercial traveller's portable computer to the central computer of the company).
- Connection to value-added services available on host computers (e. g. private electronic mailboxes, reference library data banks).

Profitability

The operator of a system of Landis & Gyr ISDN consoles has considerable scope for making the investment profitable within a very short time:

- He may make a -private- data base service available to the public on a payment basis (value added service).
- He may also use the screen of the ISDN console for advertising purposes. It should be noted that when the screen of the Landis & Gyr ISDN console is not in use, which is the case in particular if the user is only making a voice communication, the operator may cause pages of advertising material to scroll past on the screen. These advertising pages are generated by



B-6-43

IS[

Put

- Access to the ISDN S bus, with possibility of use in a multi-point configuration
- Management of communication protocol on ISDN channel D (LAP-D and Layer 3, according to I.441 and I.451)
- During transmission of data on channel B, use of the X.25 protocol (LAP-B, Layer 3 X.25)
- Access to non-ISDN Videotext type information providers, by means of a TA a/b adaptor, installed as an option
- Once the possibility of user data transfer on channel D is provided, this service will be made available, in particular for administration of calls made on credit.
- Access to certain additional ISDN services, such as call back, multi-party conference calls, provided these services are available on the network.
- Multiple means of payment:
Landis & Gyr prepaid value cards
Cards incorporating a microprocessor chip (~Smartcards~)
Magnetic commercial credit cards
- Installation on semi-protected public sites
- Overall dimensions: 49x38x130 cm
- 9" colour screen
- Supplied from the mains

Technical characteristics of
the Landis & Gyr ISDN console

B-6-44

Africa	Landis & Gyr, 9 av. Houdaille, 01-BP 8629, Abidjan 01, Côte d'Ivoire, Tel.: 32 63 78, Tlx: 22 457, Fax: 326319
Austria	Landis & Gyr GmbH, Brotenfurterstr. 148, Postfach 9, A-1231 Wien, Tel.: 0222/84 26 26, Tlx: 132 7 08, Fax: 222/84 26 26 313
Belgium	Landis & Gyr SA/NV, Av. des Anciens Combattants 190, Oud-sijdenlaan 190, B-Bruxelles/Brussel, Tel.: 02/244 02 11, Tlx: 65 630, Fax: 02/242 88 31
Denmark	Landis & Gyr A/S, Klausdalsprovej 1, DK-2800 Søborg, Tel.: (01) 69 46 00, Tlx: 22285, Fax: (01) 69 49 49
Finland	Oy Landis & Gyr AB, SF-02430 Miesala, Tel.: 00/29731, Tlx: 12 10 39, Fax: 0/297 55 31
France	Landis & Gyr Sàrl, 16 Bd. Général Leclerc, F-92115 Cllichy, Tel.: 1/47 56 57 00, Tlx: 630693, Fax: 1/47 30 39 50
Germany	Landis & Gyr GmbH, Friesstr. 20-24, Postfach 600529, D-6000 Frankfurt 60, Tel.: 069/40020, Tlx: 0417 164, Fax: 69/400 25 90
Great-Britain	Landis & Gyr Communications Ltd., Ebbotke Industrial Estate, Verwood, Wimborne, Dorset BH21 6BB, Tel.: 0202/82 46 44, Tlx: 418 341, Fax: 202 82 38 00
Ireland	Lake Electronic, Beech House, Greenhills Road, Dublin 24, Ireland, Tel.: 353-1-515422, Tlx: 30542, Fax: 01/520 826
Italy	Landis & Gyr SpA, Divisione Commerciale, Via P. Rondini 1, I-20146 Milano, Tel.: 02/42481, Tlx: 332 142, Fax: 2/48300773
Netherlands	Landis & Gyr B. V., Kampenringweg 45, Postbus 444, NL-2800 AK Gouda, Tel.: 01820/65 432, Tlx: 20 657, Fax: 1820/32 437
Norway	Landis & Gyr A/S, Caspar Stormsvei 16, P. B. 6395 Etterstad, N-0604 Oslo 6, Tel.: 02/65 10 30, Tlx: 78 348, Fax: 02/64 81 87
Portugal	Landis & Gyr LDA, Rua Filipe da Mata nr. 66-1, P-1800 Lisboa, Tel.: 01/76 93 82, Tlx: 13 698, Fax: 01/764 203
South-East Asia	Landis & Gyr (S.E.A.) PTE LTD., 460 Alexandra Road 22-03, PSA Building, Singapore 0511, Tel.: 273 61 51, Tlx: 55 782, Fax: 273 25 25
Spain	Landis & Gyr BC S.A., Batalla del Salado 25, E-28046 Madrid, Tel.: 1/467 19 00, Tlx: 22875, Fax: 1/239 44 79
Sweden	Boving Elektronik AB, St. Eriksgatan 113A, Box 21104, S-10031 Stockholm, Tel.: 08/15 17 80, Tlx: 10040, Fax: 336 863
Switzerland	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 16, Tel.: 022/733 55 00, Tlx: 751 703, Fax: 022/733 52 19
United States	Landis & Gyr, Inc., 8 Skyline Drive, Hawthorne, New York 10532, Tel.: 914/347 26 30, Fax: 914/347 26 41
Other countries	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 16, Tel.: 022/733 55 00, Tlx: 751 703, Fax: 022/733 52 19

LANDIS & GYR

B-6-45



THE INTERNET NAVIGATOR

SECOND EDITION

Paul Gilster

SCIENTIFIC & TECHNICAL
INFORMATION CENTER

FEB 25 1997

PATENT & TRADEMARK OFFICE



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NEW YORK • CHICHESTER • BRISBANE • TORONTO • SINGAPORE

- Attachment F -
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The Internet Defined

The Internet is a vast, sprawling network that reaches into computer sites worldwide. By its very nature, this interlinked web of networks defies attempts at quantification. Some sources cite Internet penetration into over one hundred countries, with twenty thousand separate networks feeding into it containing more than 2.5 million host computers and twenty million users.¹ Other sources give higher user figures, citing fifteen million people in the United States and twenty-five million worldwide who have used the Internet.² Indeed, estimates about the Internet's growth are proliferating almost as fast as new host computers on the network.

Consider that by 1985, approximately one hundred networks formed the Internet. By 1989, that number had risen to five hundred. The Network Information Center of the Defense Data Network found 2,218 networks connected as of January 1990. By June 1991, the National Science Foundation Network Information Center pegged it at close to four thousand, and, as we've seen, connections have more than quadrupled since then. If we extrapolate based on current numbers, the Internet could reach forty million people by 1995, one hundred million by 1998. Its current growth rate is 100 percent yearly.

Couple that information with an estimated 120-150 million personal computers in use worldwide and you've created a situation with dramatic possibilities. Few of the desktop computers in the average home, for example, are networked together. But many home and business computer users would like to access the Internet's rich resources. The solution: a modem and a dial-up account.

Until recently, it was difficult to access the Internet on a dial-up basis, but the increase in Internet service providers has improved that situation. In the past year and a half, estimates John Eldredge of Performance Systems International, a major service provider in Reston, VA, the number of individuals connecting to the Internet by dial-up has increased from 50 to 80 percent.³ And

B-6-48

commercial providers such as CompuServe, GENie, and Prodigy have all made Internet mail access available. DELPHI and BIX have full Internet connections with access to all major services. Demand is intense. "We've seen an incredible response to our offering of full Internet services," says DELPHI general manager Rusty Williams. "It's been well received by current members and by other people looking for Internet service options—people in business, students, researchers, families."⁴ UNIX-based service providers tell much the same story of growth in the individual user market.

A BRIEF HISTORY OF THE INTERNET

The Internet's beginnings gave no hint that it would evolve into a publicly accessible network. Like many other great ideas, the "network of networks" grew out of a project that began with far different intent: a network called ARPANET, designed and developed in 1969 by Bolt, Beranek, and Newman under contract to the Advanced Research Projects Agency of the U.S. Department of Defense (ARPA).

The ARPANET was a network connecting university, military, and defense contractors; it was established to aid researchers in the process of sharing information, and not coincidentally to study how communications could be maintained in the event of nuclear attack. From humble beginnings—the ARPANET's founders originally contemplated letting only researchers log on and run programs on remote computers—the network grew. They soon added file transfer capabilities, electronic mail, and mailing lists to keep people interested in common subjects in communication.

But even as the ARPANET grew, other networks were under development, and it became clear that new methods of communicating would be necessary. As early as 1973, in an era of mainframe computing a decade before the desktop PC revolution took hold, ARPA, under its new acronym DARPA (Defense Advanced Project Agency)⁵ began a program called the Internetting Project. The goal was to determine how to link networks. Central to this concept of "internetting" is the need to overcome the different methods each network uses to move its information. When properly implemented, so-called *gateways* can be used to connect networks, passing traffic seamlessly from one to the other.

Finding the Right Protocol

Making internetwork links work requires the right protocol. In computer parlance, a *protocol* is simply a set of conventions that determines how data will be exchanged between different programs. Protocols specify how a network is to move messages and handle errors; using them allows the creation of standards separate from a particular hardware system. DECnet, for example, is a protocol used by networks running Digital Equipment Corporation computers; Novell, a familiar name in office networking, is another example of a protocol standard that allows computers to work together. Everything from the speed of the communicated data to the addressing schemes used to move individual message traffic is factored in the protocols used by a given network.

The Internet uses a protocol called *TCP/IP*, which stands for *Transmission Control Protocol/Internet Protocol*. IP is responsible for network addressing, while TCP ensures that messages are delivered to the correct location. These

B-6-47

powerful protocols were developed in 1974 by Robert Kahn, a major figure in ARPANET development, and now president of the Corporation for National Research Initiatives (CNRI), and computer scientist Vinton G. Cerf, now president of the Internet Society and vice-president of CNRI. Their pioneering work created the mechanisms by which the Internet could appear. In fact, if we are looking for a quick definition of the Internet, we can simply say that it is a network of networks that run the TCP/IP protocol suite.

If you will fall into the habit of thinking of the Internet as a metanetwork—a network made up of interconnecting networks—you will grasp the dispersed, decentralized nature of this enterprise. Around the world, connecting through special computers called *routers* and *hubs*, computers from different manufacturers running a whole range of operating systems can communicate with each other. Digital Equipment Corporation minicomputers can talk to Sun Microsystems workstations. Standalone PCs and Macintoshes can talk to Intel machines on office networks; they, in turn, can reach large-scale regional networks, which connect their high-speed circuits over a grid called a *backbone*.

You should realize that TCP/IP is not the only protocol for connecting a variety of different networks. The Internet is actually becoming a multiprotocol network, integrating other standards into its operations. Chief among these is *Open Systems Interconnection*, or *OSI*. Developed by the International Organization for Standardization (ISO), OSI has been widely embraced in Europe, where the momentum of TCP/IP has been less overwhelming than in the United States. Systems using other protocols likewise connect through gateways to the Internet; BITNET, for example, is a network that communicates using its own standards, but which is at least partially accessible to the Internet through such linkages. And the UNIX-to-UNIX Copy Program (UUCP) network connects thousands of computers by dial-up telephone lines; its electronic mail destinations are likewise available to the Internet user.

THE INTERNET VS. COMMERCIAL ONLINE SERVICES

Commercial on-line services like GENIE and DELPHI take an entirely different approach to distributing information. If you have been a user of one or more of these systems and now want to dial into the Internet, you must master the differences between the two models. CompuServe, for example, manages its huge user base through a centralized set of computers. When you call into local telephone numbers around the world to gain access to the system, you are connecting ultimately to a centralized set of resources. More telling is the fact that the commercial operation is managed from the top as a business. There is a company behind CompuServe, just as there is behind BIX and DELPHI.

Not so with the Internet, which has grown up free of both the advantages and problems caused by management from the top. This is why, when you connect to the Internet, you must choose from among a wide range of service options (we examine these in the next chapter). No central sign-up facility exists for the Internet; rather, you make contact with a service provider who allows you to gain access to the network through local computers. The consequences of this decentralization on network resources are likewise strong. What you find on the Internet depends on the decisions of thousands of system administrators around the world. No single company has made an

B-6-50

overall decision about network design, which makes mastering the search tools we will examine later a critical part of your explorations.

What Is Packet Switching?

Consider the great problem of networking diverse computer systems. You would like to move a stream of data from one computer across a communications link to others. How does the data get there, and how can we ensure that when it does so, it arrives in precisely the condition it was when it left? Can we be sure that our addressing scheme works, and that, in the event of a network failure, our data will be rerouted so that it reaches its destination? These are problems that network protocols must address. The Internet uses a scheme called *packet switching* to solve them.

Packet switching takes data and breaks it into parts, giving each segment a header with the necessary routing information. Computers on the network examine these headers and move the data packet along to the next site. Each time, the packet gets closer to its destination. A major bonus of packet switching is that the computers routing this data can select alternate routes when a given link fails (remember, this system was developed by researchers who were considering how to ensure reliable communications when parts of the network were destroyed in a nuclear conflagration). Another bonus: The computers at either end of a packet network connection can operate at different speeds; the network itself acts as a buffer to adjust for the difference.

You may also have run across the term *circuit switching*. Think of one-to-one contact here. If you set up a data session between two computers using ordinary telephone lines, placing a call whenever you need to move data, you would be using circuit switching. The method is useful when you need to connect computers to transfer large amounts of information. But because it requires you to set up a circuit dedicated to an exclusive use each time you use it, circuit switching is unable to handle the massive amounts of diverse data carried by the Internet. Complex applications requiring contact with multiple computers must rely on the packet switching model.

The Internet Emerges

In 1993, the U.S. Defense Communications Agency mandated TCP/IP for all ARPANET hosts. In doing so, it established a standard by which the Internet could grow. From this point forward, it would be possible to add more gateways, connecting more networks, while the original core networks remained intact. Most people date the true arrival of the Internet at 1983, the year when the original ARPANET was split into MILNET—to be used for military communications—and the ARPANET—for continuing research into networking. But, as early as 1980,⁶ CSNET, a network linking computer science departments in several states, became the first autonomous network DARPA allowed to connect to the ARPANET.

CSNET eventually merged with BITNET in 1989. The ARPANET itself was decommissioned in June 1990, its functions absorbed into the broader structure of the Internet. But the two networks had established a workable principle: let networks communicate by a set of protocols, with new networks being added to an ever-growing metanetwork communicating through gateways. That principle

B-6-51

depths of the world's fastest supercomputers to 1200 bps dial-up modems moving electronic mail traffic into some of the world's poorest countries. Clearly, a directory of all its constituent networks would be a massive volume which would quickly pass out of date. Users interested in tracking down network structure will, however, be interested in Tracy L. LaQuey's *The User's Directory of Computer Networks* (Digital Press, 1990) as well as John S. Quarterman's *The Matrix* (Digital Press, 1990); both are excellent starting points. And anyone seriously attempting to monitor network growth will learn that an active on-line presence is critical.

The Big Three Internet Applications

As Douglas Comer points out in his *Internetworking with TCP/IP. Vol 1: Principles, Protocols, and Architecture*, what you as an end user see of the TCP/IP protocols is a set of application programs that enable you to use the network to good advantage.¹² You and I don't need to know the intricacies of how TCP/IP functions, though if you're curious, there's no better or more respected guide than Comer's work. But running the programs themselves is not difficult, as we'll see.

Users of dial-up computer services, like users of bulletin board systems (BBS) and commercial on-line services, have come to expect certain capabilities from their providers, which the Internet provides in its own way through TCP/IP.

Here is how the Internet delivers these basic functions.

ELECTRONIC MAIL

Electronic mail is the most elementary service, and for many users, the most useful. Many people on the Internet have used nothing but electronic mail and still find the network indispensable. You can send messages to one or more people, deliver text files, retrieve information by automated computer programs like LISTSERV (through a gateway to BITNET), and more. While access to all three of the major Internet services is vastly preferable, it's possible to do quite a lot with electronic mail alone. A good thing, too, for aside from DELPHI and BIX, the only major on-line services with a full-fledged Internet connection, there is only limited access to the Internet from the other commercial services. That means, as we'll see in Chapter 3, you have three choices:

1. Learn to use the Internet through mail alone (Chapter 8 shows you how much you can do with such a connection).
2. Use DELPHI or BIX's full-service connection.
3. Get an account with one of the full-service dial-up providers discussed in Chapter 3 (more on these options there).

Ironically, in the early days of the ARPANET, electronic mail was considered an insignificant add-in to network capabilities. No one anticipated the high volume of traffic that began to flow as scientists exchanged ideas with geographically distant colleagues. Today electronic mail is taken for granted, from small companies with office networks to giant corporations linking remote offices worldwide. Its growth has been just as strong on the commercial networks, many of whose members maintain accounts solely for the e-mail connectivity they provide.

B-6-52

FILE TRANSFER

Moving files between computers is one of the handiest features of the networking revolution. If you can find something you can use—and if it's made publicly available, as are thousands of computer files on the Internet—you can transfer it to your computer. The process is called *file transfer protocol*, or FTP. You access documents made available to the public through a procedure called *anonymous FTP*. This procedure allows you to log on to remote computers and use the resources in directories the administrators have made available to the public. Anonymous FTP will be a major tool as we retrieve files and build an Internet library later in this book.

With FTP procedures, the Internet gets challenging indeed. Instead of consulting a single library source, as on CompuServe or GENie, for a catalog of files, you are faced with thousands of computer sites offering programs and text files. To track down the program you need easily, you should learn about the access tools we'll discuss later. With them, you can locate programs, then use FTP to move them from the source computer to your service provider's computer at high speed, and subsequently download them to your own machine.

REMOTE LOGIN

Remote login, otherwise known as Telnet, provides the ability to connect to a remote computer and work with it on an interactive basis. Again, the Internet opens the doors to a worldwide computing environment, on many of whose connected machines are services, databases, and other resources that can be examined and manipulated. By using Telnet, you can log onto the library catalogs of distant universities, look for information about everything from the formation of distant galaxies to recipes for potato soup, and examine Supreme Court decisions or the lyrics of popular songs. All the while, your computer will act as a terminal of the remote computer, which will respond to your command. In many cases, menu-driven systems at the other end make interactive sessions intuitive, but some systems are considerably easier to work with than others.

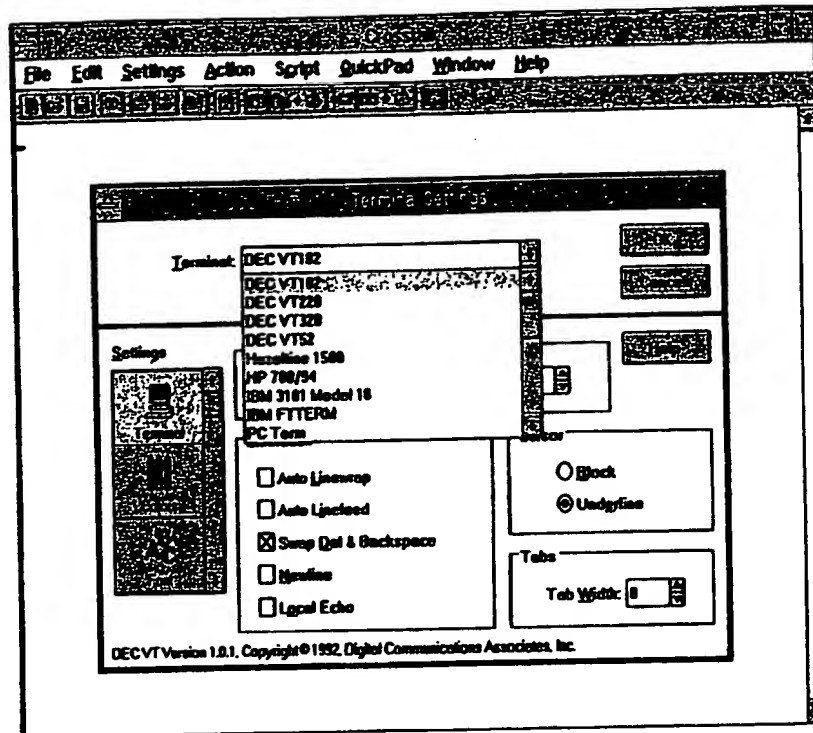
Note that when the network called "the Internet" is referred to in print, it always has a capital I. But you may also see abundant references, if you prowl your bookseller's shelves for computer books or read the computer press, to general terms such as "internets," "internetting," and "internetworking." Remember that TCP/IP can pass information among computers that aren't on *the* Internet. Your company, for example, might have local area networks in a number of sites. At some point, it would make sense for management to link those LANs together. One way of linking them is through TCP/IP. Your company would have established an *internet*, but you're not on *the Internet* unless you decide to be.

Public Packet Switching Networks

We have already discussed packet switching, and how it breaks messages into segments, each of which contains the necessary addressing information to ensure safe delivery. The ARPANET was the first major packet-switched network, running on an experimental basis for the use of DARPA contractors and not open to the general public. But as a dial-up modem user, you have probably encountered another form of packet switching, as used by networks like BT Tymnet or SprintNet. These public networks allow you to contact distant computers with a local telephone call; they then route your computer traffic to the appropriate destination.

B-6-53

Figure 3.1
Crosstalk for
Windows, terminal
emulation choices
from the Settings menu.



SIGNING ON—A PERSONAL ODYSSEY

Commercial access to the Internet has improved so dramatically in the past two years that newcomers will be startled to learn that there was a time when the process was excruciating, although many early treatments of the subject made it sound like a snap. "Need access? Just ask your system administrator," they blithely said, assuming you wouldn't ask if you weren't already working on a network in the first place. And indeed, if you were already on a network, the advice was sound. Many people to this day don't realize they can connect through their work site and that, in such cases, a simple request is usually enough to get them up and running.

But it was a different story for anyone who was trying to log on by modem from a standalone computer. For me, logging on to the Internet became something of a crusade, deepening into obsession as I continued to run into a stone wall. Several years ago, I made the mistake of asking this question: "I work out of a home office. I don't have Internet access and I don't have a system administrator. What do I do?" I asked people in my area and looked for answers on various on-line services. I peppered local bulletin boards for advice and called computer gurus in Research Triangle Park, pestering some poor souls for months.

The result? "Try the universities," some said. I called Duke, UNC, North Carolina State; access there was restricted and no one I spoke with knew how to get it. Maybe if I was a student. Unfortunately, my years at UNC had ended in the mid-1970s. "Call some of the big corporations," I was told. "Someone out there might be able to get you an account." I didn't know what I was doing, but

B-6-54

I began to make these calls. Most people didn't know what I was talking about. Those who did seemed incredulous that I would ask. "Network connections are private," they said.

Network connections private? If that doesn't give you something to think about, what does?

The Internet is not CompuServe or Prodigy. Lacking any central organization, the network has no billing address. You can't make a phone call to a network office and say, "Sign me up." You'll also get confused by the plethora of possibilities some of the people who are already on the network will tell you about. "Do you want a full connection?" they'll ask, and you reply, "Sure," not understanding why you would want anything else. "The best we can do is SLIP," you may hear. SLIP? What does it mean? And why do these people I'm talking to have nothing better to offer? Is SLIP some kind of restricted access?

It wouldn't be until CONCERT-CONNECT came along that I made my real plunge into the Internet. CONCERT-CONNECT was a service provider which, among other options, made possible local dial-up access to the Internet. It brought order into the North Carolina Internet scene by offering a flat rate per month, allowing you to log on to the computers at MCNC (formerly the Microelectronics Center of North Carolina, now known solely by its acronym, as are many computer organizations). The flat rate was attractive, as were the services; not just USENET newsgroups, but FTP and Telnet as well; not just electronic mail, but the whole panoply of features that make the Internet so fascinating.

Today, CONCERT-CONNECT is gone. In its place are a growing number of Internet service providers, each offering dial-up access. Many also offer more advanced forms of network connection, including the aforementioned SLIP (which we'll discuss in this chapter), and other forms of direct links all the way up to high-speed dedicated T1 and T3 lines. My new service provider is Interpath, a division of Capitol Broadcasting Corp., here in Raleigh. Interpath is representative of the new breed of service provider, offering network connections to a great variety of customers from individual home users to the largest businesses.

What a change. In every state, service providers are springing up; indeed, Internet access is becoming a growth industry, bidding fair to create a price war that will be followed by an inevitable period of consolidation. For you, the individual or small business user, the good news is that prices are dropping across the board. CONCERT-CONNECT once charged \$175 per month for SLIP access; Interpath is now offering comparable service for \$37.50, and regular dial-up access is cheaper still. If it's a full-service access provider you're looking for, finding one will keep getting easier. No provider in your area? There will be soon.

Even more options are appearing from the ranks of the commercial on-line services like CompuServe and DELPHI. In fact, all of the major on-line services now offer some form of Internet connectivity, even if only a gateway that allows you to send and receive mail to and from the Internet. DELPHI and BIX have moved aggressively to open full-access provisions. America Online is beginning to widen its existing mail-only gateway with a host of new services including USENET newsgroups and access to the superb Internet interface and display tool called Gopher. Watch for announcements from the other commercial services; Internet access is now the hottest ticket in town as the networks grow together into a true global matrix.

We will work our way up the access ladder to show you what options are available. If you are already on the Internet, you won't need to read the following

B-6-55



Electronic Mail as a Gateway to the Internet

File Transfer Protocol and electronic mail are both key components of Internet connectivity, but what do you do if you only have an Internet mail connection? After all, with the exception of DELPHI, BIX, and America Online, the major commercial on-line services offer only mail connectivity. Fortunately, your on-line mailbox with a commercial provider like CompuServe or GENie can become a true gateway into the Internet. You won't be able to accomplish everything—in particular, Telnet simply can't be managed by mail alone—but if you are looking for files, you'll be pleased to know you can use electronic mail to retrieve them, without needing to employ FTP procedures yourself.

This chapter is devoted to people with accounts on the CompuServes and GENies of this world. Let's be clear on this: The optimum connection for a dial-up user is a full-access account with an Internet service provider, because it gives you the ability to use all three key Internet protocols—e-mail, FTP, and Telnet. But maybe you're hoping to shop around on the Internet first, to see what's available. Or perhaps you use CompuServe daily and would like to streamline your operations, running everything through your account there. Whatever the case, if you need to transfer files by mail, you can do it. The solution is workable, and while it's not exactly elegant, it does what you want it to do.

B-6 56



What is a Background Document on Internet Pages

The Document YAG: How Can I Send a Fax from the Internet

How to Get it: The document is posted regularly on the USENET newsgroups alt.internet.services, alt.online.service, alt.bbs.internet, alt.answers, and news.answers. You can also get new editions automatically by sending mail to this address: server@abulnet.fsking.com. Add it to the distribution list.

FINGER BY MAIL

finger is a program we discuss in Chapter 14 which allows you to retrieve information about users and, in some cases, about a wide variety of information such as earthquake updates or popular music. Normally, finger is run as a program on your UNIX service provider's computer. However, you can also use electronic mail to send and retrieve the results of finger queries. To do so, send e-mail to:

b.11661cott@ic.ac.uk

In the Subject: field, put this command: `#finger user@site` where `user@site` is the address you want to reach. You will find a list of potential finger sites in Chapter 15's directory.

Suppose, for example, that you want to retrieve NASA headline news. The address is nasanews@space.mit.edu. Your e-mail request would then read:

```
#finger nasanews@space.mit.edu
```

placed in the Subject: field of the message. Sending this, you will shortly receive an update on NASA press releases.

SENDING ELECTRONIC MAIL TO OTHER NETWORKS

If you have any doubts that Internet electronic mail opens out to networks across the world, consider the evidence of John J. Chew's *The Inter-Network Mail Guide*, available on the Internet both as a posting in various USENET newsgroups and also by download with anonymous FTP. Chew tracks the ways in which the various commercial providers maintain links to and from the Internet, and his list is growing with each new posting. A glance through it reveals linkages to such varied providers as Geonet Mailbox Systems, BIX, GreenNet, KeyLink, PeaceNet, SprintMail, and AppleLink, to name literally but a few. Chew's list will come in handy, and I advise you to get a copy.

Now you will learn how to send mail from the Internet to addresses at the major on-line services.

B-6-57



What You Need: A List of Network Interconnections
The Document: Inter-Net-Work Mail Guide by John Chew
How to Get It: Through anonymous FTP to ftp.msstate.edu. The directory is pub/docs. The file name is internetworkmailguide. You can also keep up with changes to this document by monitoring the USENET news groups comp.mail.misc and news.newusers.questions.

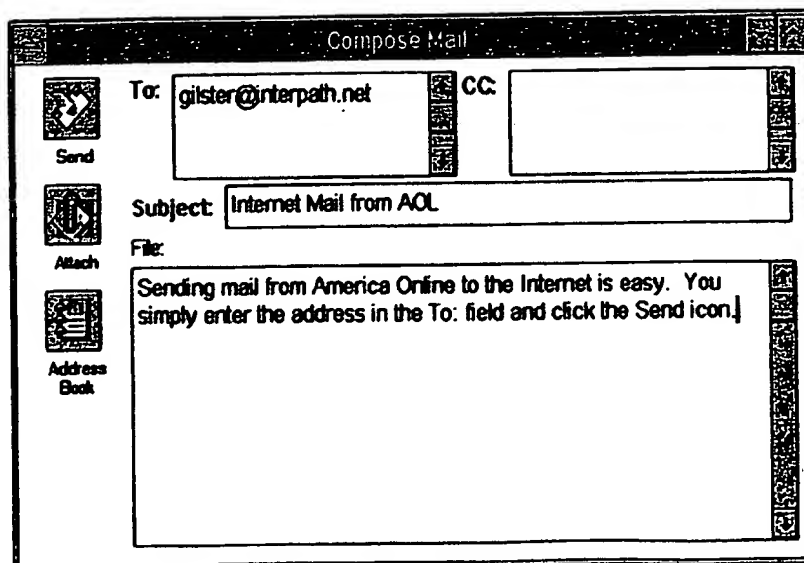
America Online

To send mail from the Internet to America Online, the syntax is `username@aol.com`. The user name should be all lowercase, with spaces removed.

Outgoing messages cannot be any longer than 32k. On the PC version of America Online, incoming mail cannot be any longer than 8k, which effectively prevents your using this service for ftpmail file transfers. On the Mac version of America Online, as well as the Apple II version and PC-Link, incoming mail cannot be any longer than 27k. All characters except newline and printable ASCII characters are mapped to spaces. Users are limited to seventy-five pieces of Internet mail in their mailbox at a time.

To send mail from America Online to the Internet, simply enter the Internet address and write your message. Figure 8.19 shows the process in action.

Figure 8.19
Sending a message to
the Internet from
America Online.



B-6-57

BIX

To send mail from the Internet to BIX, the syntax is `username@bix.com`. To send mail from BIX to the Internet, enter the Internet address preceded by `to at the Mail: prompt`. The following is an example of a message being sent from BIX to the Internet:

```
Mail:to gilster@interpath.net
Enter subject: Mailing from BIX
Enter text. End with '. <CL>
```

This message is to test BIX's connections to Internet e-mail.

```
send/action:send
Sending..Memo 76679 sent
```

There are no size restrictions on BIX messages to and from the Internet, and no monthly or per-message fee for Internet mail. You can move up to 10MB per calendar month (in both directions, to and from the Internet), without any additional charges. Beyond that, the charge is \$1.00 per 100k transferred. Messages can be up to 0.5MB in length in either direction; longer messages may be truncated.

CompuServe

To send mail from the Internet to CompuServe, the syntax is `usernumber@compuserve.com`. CompuServe user numbers contain commas, which must be changed to periods when you send from the Internet. Thus 12345,6789 becomes 12345.6789. To send me a CompuServe message, for example, you'd send to 73537.656@compuserve.com.

To send mail from CompuServe to the Internet, as just shown, lead off the address with `>INTERNET:`. Sending a message to `ftpmail`, then, requires the address:

```
>INTERNET:ftpmail@decwrl.dec.com
```

DELPHI

To send mail from the Internet to DELPHI, the syntax is: `username@delphi.com`. To send mail from DELPHI to the Internet, use the word `internet` followed by the recipient's name (with no spaces in between) enclosed in quotes. On DELPHI, to send a message to `ftpmail`, for example, you would address it to `internet"ftpmail@decwrl.dec.com"`. The following is a sample message from Delphi to the Internet:

```
MAIL send
To:      internet"gilster@interpath.net"
Subj:    Test Message
Enter your message below. Press CTRL/Z when complete, or CTRL/C to quit:
Checking the DELPHI connection to the Internet.
^Z
```

B-6-58

GENie

To send mail from the Internet to GENie, the syntax is `username@genie.geis.com`. To send mail from GENie to the Internet: After entering the Internet address, you are prompted for additional GENie addresses, copies, and a subject line. You can then enter your text. Figure 8.20 shows a GENie message to an address on the Internet as it is being composed. GENie's Internet mail services cost \$3.00 per hour.

MCI Mail

To send mail from the Internet to MCI Mail, the syntax is: `username@mci-mail.com`. MCI user names should have spaces removed. Thus Sam Spade becomes `Sam_Spade@mciemail.com`. Conversely, it's possible to use an MCI user number. If Sam's number is 123-4567, simply remove the dash. Thus `1234567@mciemail.com`. If there happens to be more than one Sam Spade in the MCI directory, you can reach the desired party by sending to:²

`Sam_Spade/1234567@mciemail.com`

To send mail from MCI Mail to the Internet, use the EMS option. Here's how to do it:

- At the TO prompt, type recipient's name and the word EMS in parentheses.
- At the EMS prompt, type **INTERNET**.
- At the MBX prompt, type the recipient's Internet address. Note: If the Internet address exceeds eighty characters in length, you must split the

Figure 8.20
Sending a message to
the Internet from
GENie.

```
Enter Destination GENie Address or C/R to continue.
?

Would you like to receive a copy of the message? (y/n) ?n

Enter the subject of your Internet message (max 30 characters) or C/R for no sub
ject.
{.....}
Mailing from GENie
```

```
When you see the prompt, !>, enter your message.
When you have finished entering your text, use the *S,
to send the Internet message. Use *X to exit without sending.
```

```
Enter Internet text.
```

```
Queued Item from Length Sent Subject
1 6239343 GENIE.HQNT 268 93/05/27 New Pricing Effective July 1st
```

```
!>GENie prompts the user through the mail process, so sending mail to
!>the Internet is relatively simple. You will be prompted for additional
!>addresses for your message, asked if you'd like a copy of it, and given
!>space to enter a subject line.
```

B-6-59

address into multiple MBX lines. The split should occur at one of the following characters: @ ! %.

- Only one Internet mailbox may be used with an individual TO or CC recipient.
- Complete the mailing procedure as usual.

Figure 8.21 shows an example of sending a message to an Internet address from MCI Mail.

Prodigy

Prodigy is the huge commercial service created by IBM and Sears. To send mail from Prodigy to the Internet, you will need a program called Mail Manager. Jump to *About Mail Manager* while on-line to learn how to download it.

To send mail from the Internet to Prodigy, use the Prodigy user ID followed by the domain name. Thus, to send mail to klbc98x, you should address the message to klbc98x@prodigy.com.

MAILING LISTS AND ELECTRONIC JOURNALS

A huge variety of mailing lists is available to people with electronic mail access to the Internet. So much is available here that it would make little sense

Figure 8.21
Sending a message to
the Internet from MCI
Mail.

EMS: INTERNET
EMS 376-5414 INTERNET NRI Reston

Enter recipient's mailbox information.

MBX: mike_banks@bix.com

If additional mailbox lines are not needed press RETURN.

MBX:

TO: Mike Banks
EMS: INTERNET / MCI ID: 376-5414
MBX: mike_banks@bix.com

Is this address correct (Yes or No)? y

CC:

Subject: MCI Mail Check

Text: (Enter text or transmit file. Type / on a line by itself to end.)

Mike:

Please let me know if this message gets through OK. It's routed to your BIX account via MCI Mail.

Thanks!

Paul

B-6-60

(9)

B-6-61

internet

The Magazine for Internet Users n Nov/Dec 1994 n \$4.95

WORLD

CHATTER

• NEWSGROUPS

• VIRTUAL ENCOUNTERS

• DIGITAL RIGHTS

• SUPERNATURAL SITES

CHATTER

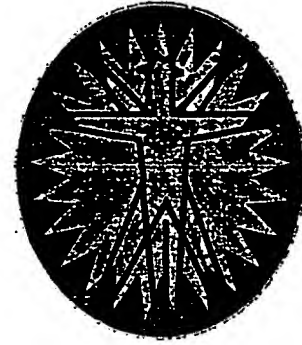


Attachment 6

B-6-62

Departments

LETTERS TO THE EDITOR	4
FROM THE EDITOR by Michael Henbarth	6
INTERNET NEWS	10
INTERNET BOOKSHELF Edited by David Bean	104
POINTERS	108
INTERNET FORUM	108
INDEX TO ADVERTISERS	112

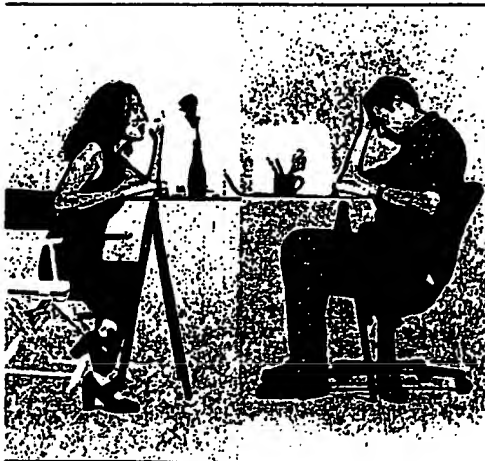


78



99

c o n t e n t s



50



86

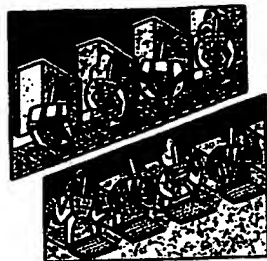
Columns

THE SURFBOARD by Andrew Kantor and Eric Berlin	14
NET PROFITS: Power Rap by Christopher Locke	18
INFO HOUND: Herbs, Ella, and IRC by Dave Taylor	22
ENTRY LEVEL: Learning the Ropes: A Usenet Style Guide by Andrew Kantor	24
DIVING INTO THE INTERNET: Internet: Going South by Joel Snyder	94
FOUND IT ON THE NET: Work or Play? by Linda J. Engelman	96
THE INTERNET CURMUDGEON: Painting the Right Picture by Daniel P. Dern	99
ARTIST AT LARGE: Going Graphical (There's No Place Like Home Page) by Kenny Greenberg	102

B-663



64



Features

USENET: Past, Present, and Future by Dave Taylor	26
SECRETS FROM WITHIN USENET by Kevin Savetz	31
NEWSREADERS: An "n" User's Guide by Robert Sanchez	34
NEWSGROUP CULTURE by Robert Sanchez	38
DOUSING FLAMES by Kristina Harris	42
VIRTUAL ENCOUNTERS by Thomas Barrett & Carol Wallace	45
THE EX FACTOR by Brad Stone	50
GABFEST—INTERNET RELAY CHAT by Aaron Weiss	58
ALL THE NETNEWS THAT FITS Interview with Brad Templeton of ClariNet by Jeff Ubois	64
SERVING ADS by Joseph Raben	70
ANATOMY OF LISTSERV by Karl Signell	76
DIGITAL RIGHTS by Jean Erhard	78
ALIENS AMONG US by Andrew Kantor	82
WHY TEACHERS FEAR THE INTERNET by Crawford Kilian	86
SUPERNATURAL, STRANGE, AND SINISTER by David R. Noack	88

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B-6-64

Aliens Among Us

A horde of new users from America Online, CompuServe, GENie, and Prodigy is coming onto the Internet.

By Andrew Kantor

If you listen carefully, you can hear the grinding of gears and the creak of metal. The big guns of the on-line world—America Online, CompuServe, GENie, and Prodigy—are slowly turning and taking aim at the Internet, and cyberspace will never be the same.

For users of these services, the next few years will see the opening of a doorway (gateway, rather) to a vast and almost uncharted resource. For veterans of the Net, it means an influx of new users (often referred to in a less-than-friendly tone as "clueless newbies") that puts the college September Rush to shame.

There has already been a test case: a virtual sacrifice to the gods of the Net, if you will. America Online (AOL) expanded its Internet services in March 1994, making Usenet Newsgroups accessible to its users. But those users quickly learned the hard way that the Internet did not have an enforced Terms of Service to keep users friendly. They were faced with a barrage of verbal attacks. Their crime? Simply not knowing where to post their messages. But on the Internet, ignorance is never an excuse, and there is no friendly sysop only an instant message away.

Of course, from the Internet users' point of view, thousands of postings from aol.com were suddenly invading the Usenet, often in inappropriate newsgroups. ("Someone searching for family in Oregon should know enough not to post in alt.best.of.internet," says one Usenet veteran.)

America Online learned some valuable lessons that the other services should take to heart before taking the

leap beyond their cloistered walls. The most important? That explaining to users what they're getting into may save them a lot of time and trouble . . . and a good deal of embarrassment.

But AOL is not the only service with Net-related troubles. Prodigy opened a local Internet bulletin board so its users could discuss the global computer network. But somewhere along the line a signal got crossed, and users thought the bulletin board was the Internet. Messages to the tune of "Hi, I'm in Nebraska. Is anyone out there?" propagated the board, as more savvy participants tried to explain—with limited success—what was going on. So Internet citizens, fresh from dealing with 650,000 spanking new AOL users, dread the impending flood from Prodigy's and CompuServe's four and a half million total subscribers.

America Online: Act II

Despite some problems with quirky Usenet software (it posted some users' messages up to a dozen times) and untrained users, America Online has weathered the storm, and now is ready for the next step. AOL now offers a Copher client and limited access to some WAIS databases. FTP and telnet services also are planned, although no date has been set, according to managing editor Kathy Ryan. "We've been driven by what our customers ask for," she said.

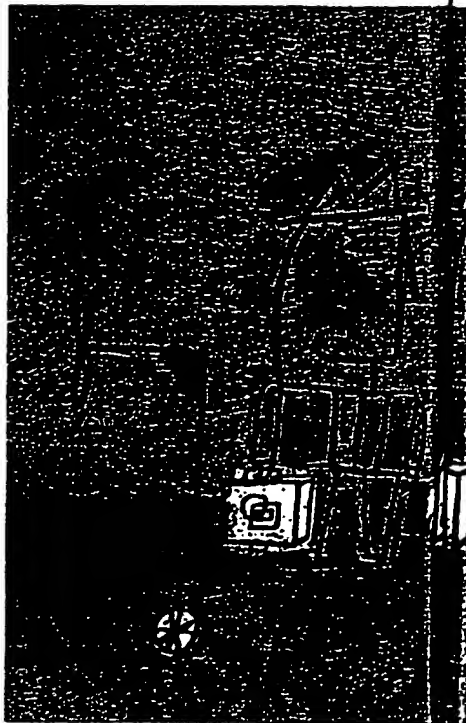
However, AOL's Copher and WAIS services won't look familiar to veterans of the Internet, and not just because of the graphical look. The two applications have been combined under a single interface: a Copher-like series of menus that present either text files or other menus. In addition, AOL is limiting the Copher

information it will make available, and users will only be able to easily access Copher services that AOL's editors have chosen. Veronica searches also are limited: You cannot choose the server to search. And WAIS searches will not return the relevancy information the system is known for. Thus, AOL's combined Copher/WAIS offering is a watered-down version of both applications that seems to promise more than it delivers—a charge AOL has faced before.

AOL has been courting partners to increase the services it provides. An alliance with publisher Simon and Schuster, for instance, will allow AOL to offer College Online to provide e-mail and other resources for students and educators as an alternative to the Internet.

Another service being tested is a TCP/IP connection that will enable users to access AOL through an office LAN or via a SLIP or PPP Internet connection. The beta software is only available for

Illustration by James Yang



B-6-65

Macintosh users, and is located at AOL's anonymous FTP site, ftp.aol.com, in the /mac directory. The file is called TCP-for-Mac-AOL-2.1.sea; a README file provides instructions. (AOL's standard Macintosh and Windows software is also available at that site.)

On the Usenet front, complaints about AOL users continue to mount. According to Ryan, "(the reaction) wasn't surprising. When we came onto the Internet, I believe we came on as the single largest site, and we did have some members who didn't understand netiquette." But that's changed now, she says. "I think AOL has done more to educate its users than anyone else." For instance, the service now has unofficial "Net buddies"—Internet-savvy users who monitor Usenet and inform newcomers when they violate netiquette.

America Online's users are not entirely to blame, according to some. AOL software makes it difficult to reply by e-mail (users must post personal follow-ups instead) and users cannot include original message text in their replies. AOL users also must pay \$3.50 per hour to use News because there is no off-line newsreader. That means, as one user puts it, that they must pay to think; the more they think about what they write, the more it costs.

In late August, thanks to an aggressive campaign of giving out free trial

accounts, AOL claimed to have reached the one million subscriber mark, making it slightly less than half the size of CompuServe or Prodigy.

CompuServe: Slow and Steady May Win the Race

While AOL was opening its doors to let its users out, CompuServe's first step was to let its users in, by allowing users to telnet to their CompuServe accounts from the Internet. CompuServe can do this for one simple reason: Its service is text-based (although graphical front ends are available) and thus well-suited for use through one of the Internet's typical terminals.

Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time, but it charges for e-mail usage beyond a certain volume: After about 60 free three-page messages each month, users must pay approximately 5¢ for each 1,500 characters they send or receive.

CompuServe recently gave its users access to Usenet News, and provided plenty of warning signs along the way ("This information originates *outside* of CompuServe, and CompuServe therefore claims no responsibility for the content."). However, CompuServe's Usenet software suffers from some of the same problems as America Online's. Most obvious is the inability to automatically insert text from an original message into a follow-up message.

CompuServe's Usenet software betters AOL's in one way: When you choose to reply to a message, the default settings send the reply through e-mail only, and not into the newsgroup—a feature many Usenet residents will appreciate.

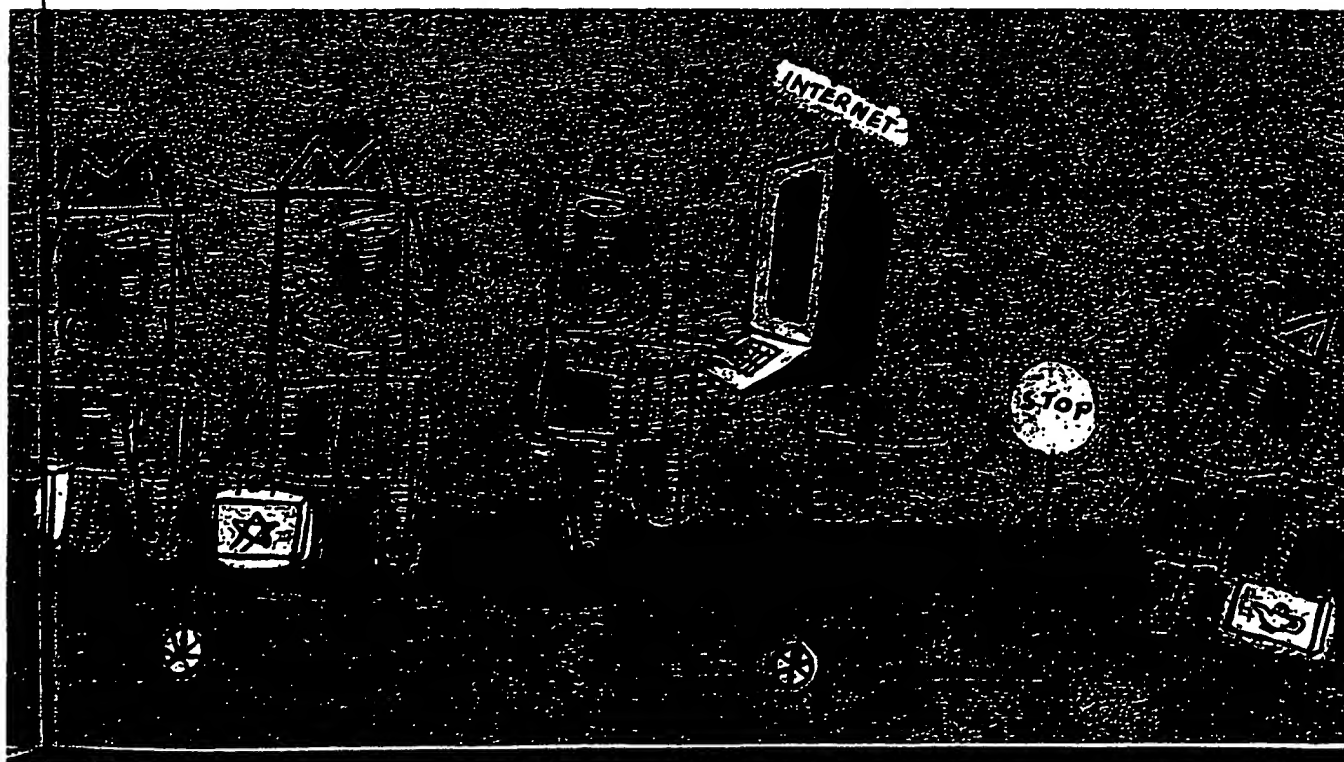
While seeking to protect the Internet from breaches of netiquette by its members, CompuServe also is trying to shield its members from any perceived offensive aspects of the Internet. Scroll through the lists of available newsgroups on CompuServe, for example, and alt.sex is nowhere to be found. However, you can subscribe to the newsgroup by typing in the name yourself.

Choosing a group from one of CompuServe's lists is no piece of cake. You must slowly scroll through hundreds of listings in alphabetical order. For example, to find alt.tv.something, you must make your way through everything from alt.1d to alt.travel.roadtrip.

And if you happen to subscribe to one of the ".binaries" newsgroups, where people post encoded pictures, sounds, or movies, the newsreader software offers no means to decode them. America Online left out this function as well, much to the chagrin of the people who frequented those groups.

According to Dave Bezaire, CompuServe's senior product manager, the service is planning several other new Inter-

Illustration by James Vance



B-6-66

"Our intention is to be very clear with our members about what the Internet is—to make them aware that they're leaving this world."

net-related features, but does not want to release too many new offerings at one time. "The tremendous press coverage of the Internet has raised expectations sky high," Bezaire says, "so we want to avoid overhyping it in our community before it's available."

Bezaire would not comment on what else might lie ahead for CompuServe. "Our philosophy is to bring Internet services forward on an incremental basis—manage the process, manage the service, and educate the community," he said. "As we release additional Internet products and services, I want it to be a satisfying experience for all our members."

GEnie: Holding Its Ground

GEnie has been offering an e-mail gateway to and from the Internet for several years, but nothing more. That's the way it will likely stay "for the foreseeable future," according to Vivian Kelly, media relations specialist.

As on AOL, e-mail on GEnie is free and unlimited. And GEnie users are not entirely cut off from the Net: It offers an Internet RoundTable, in which sysops will gladly search for and retrieve files if requested by users, and will even scan files for viruses. But Kelly says that GEnie has been reluctant to offer full Internet access because the service is part of General Electric Information Services (GEIS) and its corporate customers have concerns about security.

Prodigy: In Time, All Things

With more than two million individual users, Prodigy is the world's largest on-line service, and it is preparing to open its door to the Internet—albeit slowly.

Prodigy already has an e-mail gateway to the Internet, although users must acquire separate software to send and receive messages. But that's going to change,

according to product manager Bill Day, who said that basic Internet e-mail capabilities would soon be integrated into the software. "We're reorganizing Prodigy to put more focus on the Internet," Day explained. "We're very excited about it."

The next phase of Prodigy's Internet access will be some refinements to the e-mail software, and access to Usenet News. And Day said the service had given a lot of thought to how Prodigy users would react to the Internet, and vice versa. "We've been thinking about how we should educate our people on how the newsgroups operate. We need to cover How do you behave, and What do you not do?"

Prodigy will try to lessen the force of the impact—if not the scope—in several ways. First, it will cache Usenet News on its own server to reduce the impact on the Internet. Second, unlike America Online, Prodigy won't be making it easy to reach Usenet. "Our approach is that you have to be interested and knowledgeable enough to reach these services," Day said. "The people must be communications savvy. It's not point and click." Those measures, coupled with a "strong education effort," he said, should mean that Prodigy users would know how to behave when they reached Usenet.

Prodigy is also planning to offer services that don't appear on the Internet, including an alliance with CBS to offer interactive entertainment features including show previews.

In terms of the Internet, Day said that Prodigy eventually would offer some sort of Gopher-like access to information on the Internet, including government resources, sound files, and other data that might interest users. But the information would be far from comprehensive, and would be a selection of some of the more popular files. "We would act as a mediator between the Internet and our members," Day said.

"Our intention is to be very clear with our members about what the Internet is, and to be honest about the world out there—to make them aware that they're

leaving this world," Day explained. "We're thinking hard about what we've learned about content and customer service by running our own little on-line service, and that will affect how we pick content and how we present it to people."

Down the Road

The major on-line services are not rushing to provide full Internet access because doing so might well lead to their demise. After all, no matter how you access the Internet—from school, a local provider, or a commercial service—the content is the same. And as better, user-friendly Internet interfaces like Mosaic and Eudora are developed, AOL, CompuServe, and Prodigy will find it harder to differentiate themselves from the Internet.

How can the on-line services compete in this evolving landscape? First, they must keep a step ahead of the Cellos and Trumpets, and must design interfaces that any junior high school student can use. They also must develop a friendly help staff to assist users in learning to cruise in cyberspace. Users only will be willing to pay more if they're getting something extra, such as 24-hour support.

The on-line services also will have to stop charging hourly fees for Internet services. Anyone who follows more than five or six newsgroups knows that on-line time can add up, so why pay \$3-\$10 per hour when you can find a local Internet provider that charges a flat rate?

Another way on-line services could compete with the Internet would be to filter it. Users could be guaranteed an environment that's friendlier, if not as open—a homogenized, pasteurized, porn-free, flame-free Internet.

Now is not the time to place bets on which of the on-line services will prosper or survive. The landscape is changing every day, and no one can venture more than a guess as to how the market will shake out over the next few years.

Andrew Kantor (ah@mecklermedia.com) is associate editor of Internet World.

B-6-67

On Haiti, Shooting From the Lip The Washington Post October 6, 1994, Thu

19 of 21 DOCUMENTS

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October 6, 1994, Thursday, Final Edition

SECTION: STYLE; PAGE B7; CYBERSURFING

LENGTH: 939 words

HEADLINE: On Haiti, Shooting From the Lip

SERIES: Occasional

BODY: "

Pit Stops

For those visiting London who are in need of a quick daytime fix, "Cyberia" — a "cyberspace cafe" — has opened recently in central London offering coffee, cakes and connection to the Internet. **Connect charge: 1.95 British pounds per half-hour.** The address is 39 Whitfield St., W1 (near to Goodge Street underground station on Tottenham Court Road).

Jeremy Robinson

robinson@well.com

We also hear that at the Infomart in Dallas, off the Stemmons Freeway west of downtown, the newly opened High Tech Cafe has a computer maitre d' that asks diners in its machine voice, "Nonsmoking, smoking, or modem-ready?" Sure enough, not only is there a phone jack at the table, but a fax machine is ready nearby.

Found something intriguing, improbable, insane or especially useful on the Net? Tip Karen Mason Marrero (kmarrero@aol.com) or Joel Garreau (garreau@well.com).

GRAPHIC: ILLUSTRATION, MARC ROSENTHAL FOR TWP

LOAD-DATE: October 6, 1994

~ Attachment H

B-6-L8

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE NORTHERN DISTRICT OF ALABAMA
3 EASTERN DIVISION

4 RICHARD P. METTKE,

5 Plaintiff,

6 vs.

7 TOUCHNET INFORMATION SYSTEMS,
8 INC.,

9 Defendant.

) ORIGINAL

) No. 98-PT-596-E

10 THE DEPOSITION OF DANIEL J. TOUGHEY, produced,
11 sworn and examined on behalf of the Plaintiff pursuant
12 to Notice, between the hours of eight o'clock in the
13 forenoon and six o'clock in the afternoon of Tuesday,
14 June 16, 1998, at the law offices of Spencer, Fane,
15 Britt & Browne, 1400 Commerce Bank Building, 1000
16 Walnut, in the City of Kansas City, in the County of
17 Jackson and State of Missouri, before me,

18 LYDIA HURLEY, RPR
19 BOWEN MOTTER REPORTING
20 911 MAIN, SUITE 1930
21 KANSAS CITY, MISSOURI 64105

22 a Notary Public in and for Jackson County, Missouri,
23 in a certain cause now pending in the United States
24 District Court for the Northern District of Alabama,
25 Eastern Division, wherein RICHARD P. METTKE is
Plaintiff and TOUCHNET INFORMATION SYSTEMS, INC., is
Defendant.

A P P E A R A N C E S

26 For the Plaintiff: Tobor & Goldstein
27 1360 Post Oak Blvd., Ste 2300
28 Houston, Texas 77056-3023
29 By Mr. John T. Polasek

30 For the Defendant: Spencer, Fane, Britt & Browne
31 1000 Walnut, Suite 1400
32 Kansas City, Missouri 64106
33 By Mr. Richard P. Stitt

34 - Attachment I -



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B-6-65

STIPULATIONS

It is hereby stipulated and agreed by and between the parties herein that presentment to the attorneys of record of a copy of this deposition shall be considered submission to the witness for his signature within the meaning of Federal Rules of Civil Procedure; but shall in no way be considered as a waiver of the witness' signature, and is to be signed at any time before the time of trial; and if not signed by time of trial, may be used with the same force and effect as if signed.

INDEX

WITNESS:	PAGE
DANIEL J. TOUGHEY	
Examination by Mr. Polasek	4
Examination by Mr. Stitt	83
Further Examination by Mr. Polasek	98
SIGNATURE:	107
CERTIFICATE:	108

INDEX OF EXHIBITS

NO.	DESCRIPTION	PAGE
1	Notice	5
2	Answer to Interrogatory No. 1	17
3	Network Topograph Diagram	20
4	John Murphy Affidavit	25



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B-670

INDEX OF EXHIBITS (CONT'D.)

	NO.	DESCRIPTION	PAGE
1			
2			
3	5	Videotape "TouchFax America"	40
4	6	1st brochure of product	54
5	7	TF700 TouchNet terminal brochure	55
6	8	TF700 brochure	56
7	9	Not identified	-
8	10	Ad for Telephony Magazine	57
9	11	TF450 brochure	58
10	12	Interactive World article, 10/92	59
11	13	Multimedia Interactive Terminal Loc. ducmt	59
12	14	KC Business Journal article, reprint	60
13	15	1992 brochure	60
14	16	Copy of Patent # 4359631	63
15	17	Info from VPR Creative Group	66
16	18	Invoice from Spinnaker	67
17	19	Invoice to Prodigy	68
18	20	Printout of source code/transaction log	69
19	21	Documents re: TON Services, Inc.	70
20	22	Documents re: Mediatel	74
21	23	Fax to D. Vermeire, 11/92	77
22	24	Document to D. Vermeire, 9/92	79
23	25	License Agreement	80
24		(Exhibits were retained by Mr. Polasek)	
25			



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B-6-71

1 wide web sites they would like to go to. And I
2 believe now America On-Line has a world wide web
3 site and a dedicated interface through a dial-up
4 system, so they have two different paths, if you
5 will. And so I guess ours is the latter, we will
6 provide access to the internet and let somebody
7 decide where they want to go.

8 Q Okay. Let's back up. I was asking you questions
9 that relate to a user of the terminal being billed
10 for access to the internet through the use of a
11 commercial on-line service provider such as
12 Prodigy or AOL, CompuServe.

13 A Yeah.

14 Q And you said that TouchNet does not currently use
15 or have a terminal that does that.

16 A Correct.

17 Q But you did indicate they have plans to do so?

18 A Correct.

19 Q Okay.

20 A But not necessarily through America On-Line as a
21 internet service provider.

22 Q Okay. Then how is it that --

23 A You will go through a variety of different
24 internet service providers so just -- Earth Link,
25 for example, they provide -- let's say they



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B-672

1 provide internet dial tone basically, right?

2 Q Okay.

3 A And our systems then will -- as if you are the

4 user, will ask you where you want to go.

5 Q Okay.

6 A Or highlight different destination points on the

7 world wide web.

8 Q But if I am the user --

9 A Uh-huh.

10 Q -- I am going to have to put my credit card in

11 there and pay for that access, correct?

12 A That is the plan.

13 Q Okay. And what I am trying to get at is, do we

14 have the terminal and the software set up to do

15 this? Do we expect to roll out a terminal this

16 year, next year --

17 A Yes.

18 Q -- or when?

19 A Very soon.

20 Q At the present time, TouchNet has not rolled out

21 one of those terminals though?

22 A Not that charges for the service.

23 Q Okay. When you say very soon, can you be more

24 specific?

25 A Sometime in the next 30 days. But, again, it is



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B-673

1 Q That would be on that particular machine?
2 A It would be stored, yes, on that particular
3 machine.
4 Q If they went to a different machine in another
5 part of the airport or something, their card would
6 go through the same validation procedure?
7 A Correct, right, correct.
8 Q This exhibit, Exhibit 3, also references an
9 on-line interactive database. And the second
10 bullet point below that, it says, Public - Access
11 to CompuServe, Prodigy.
12 A Correct.
13 Q This goes back to our earlier discussion, but the
14 terminal that this document attempts to describe
15 does not disclose the use of the credit card to
16 pay for access to CompuServe or Prodigy, correct?
17 A This document doesn't specifically do that.
18 Q And at that time, TouchNet was not -- the terminal
19 was not set up to charge the user for access to
20 CompuServe or Prodigy; is that accurate?
21 A Well, at that time, the terminal didn't even have 1991
22 CompuServe or Prodigy on it. At that time, these
23 were -- these are ideas of what you could do
24 because, again, our main business was selling to
25 third parties our system.



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B-6-74

1 internet pop up there. Did you notice that?

2 A No, I didn't.

3 Q Let's see if we can go back. I'm not able to get
4 it stopped there. See if I can try it again.

5 MR. STITT: Let me give it a try.

6 THE WITNESS: I think I did see that.

7 You are in front of it now.

8 (Whereupon, the videotape, Exhibit 5,
9 was rewound to counter 34.)

10 Q (By Mr. Polasek) Now that we have been able to
11 stop the tape, it shows a rectangular gold block
12 labeled internet. I think it is right at -- I
13 thought it was the 36 second mark. It may be 34.

14 MR. STITT: It appears to be 34.

15 Q (By Mr. Polasek) Did that provide for access to
16 the internet? If the user was to touch that icon,
17 I guess is what you would call it, that portion of
18 the TouchNet screen, does that enable a user to
19 gain internet access or do you know?

20 A Not at that time, no. That was like MCI mail
21 above it. Those are possible uses for the system.
22 And so the reason we built this video was to sell
23 our systems. And so, again, the vision of
24 TouchFax, TouchNet was its multipurpose
25 information communication terminal that, depending



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0-675

1 other types of information databases such as USA
2 Today sport center for on-line sports information.

3 And then the last bullet is BBS, which is for
4 bulletin board service applications, any kind of
5 bulletin board, which was really, you know, a
6 predecessor in many respects, you know, to the
7 world wide web. Different types of information
8 bulletin boards that our system could access.

9 MR. STITT: I think we can go on unless
10 you have redirect.

11 FURTHER EXAMINATION

12 BY MR. POLASEK:

13 Q Yeah, I have some questions starting with what was
14 marked as Exhibit No. 3. Let me start over. With
15 regard to Exhibit 3, isn't it accurate that access
16 to Prodigy and CompuServe was not available at the
17 time that this document was prepared on the
18 TouchNet terminal?

19 A That's correct.

20 Q Okay. So at the time that this document was
21 prepared, you couldn't access Prodigy or
22 CompuServe from a TouchNet terminal?

23 A In 1991, that's correct.

24 Q And this document -- again I think we have been
25 through this -- this document itself does not



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B-6-77

Request for Continued Examination (RCE) Transmittal

Address to:
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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450



Application Number	09/134,831 (Reissue)
Filing Date	August 17, 1998
First Named Inventor	Richard R Mettke
Art Unit	2743
Examiner Name	Stella Woo
Attorney Docket Number	N/A

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

- a. ☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

ii. ☐ Other _____

- c. ☒ Enclosed

☒ Amendment/Reply
Affidavit(s)/ Declaration(s)

☐ Information Disclosure Statement (IDS)

iv. ☐ Other _____

3. Miscellaneous

- a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

- b. ☐ Other _____

Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to

- a. ☐ Deposit Account No. _____ I have enclosed a duplicate copy of this sheet.

☐ RCE fee required under 37 CFR 1.17(e)

- ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17)

iii. ☐ Other _____

- b. ☐ Check in the amount of \$ _____ enclosed

- c. ☒ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature

Name (Print/Type)

Richard R Mettke
Richard R Mettke

PTO-2001/0-26-06

395.00 OP

Registration No.

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and

Signature

Name (Print/Type)

Richard R Mettke
Richard R Mettke

Date 10-25-06

B-6-78

Appendix C- Related Proceedings

Appendix

The opinion in support of the decision being
entered today was not written for publication
and is not binding precedent of the Board.

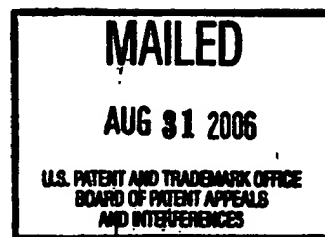
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD P. METTKE

Appeal No. 2006-0625
Reissue Application 09/134,831

ON BRIEF



Before BARRETT, LEE, and MEDLEY, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from
the final rejection of claims 6-9. Claims 1-5 have been
canceled.

We affirm, but also enter new grounds of rejection.

REISSUE and PROTESTS

This application was filed on August 17, 1998, for reissue of U.S. Patent No. 5,602,905 (the '905 patent), entitled "On-Line Communication Terminal/Apparatus," by inventor Richard P. Mettke, issued February 11, 1997, based on Application 08/376,247, filed January 23, 1995. The reissue declaration by inventor/Patent Owner Richard Mettke states that he believes the patent to be wholly or partly inoperative or invalid by reason of claiming less than he had a right to claim, in particular, because he removed the word "Internet" from the specification and the claims without submitting additional claims directed to an online communications terminal for accessing the Internet.

Protests were filed under 37 CFR § 1.291(a) by: (1) TouchNet Information Systems, Inc. on November 4, 1998; (2) North Communications, Inc. on March 31, 1999; and (3) Griffes Consulting, SA on August 11, 1999.

LITIGATION

Mettke v. Hewlett Packard, Co. and North Communications, Inc., No. CV-97-TMP-3160-E (N.D. Ala. filed December 8, 1997), dismissed with prejudice by Order entered December 8, 1999.

Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed March 16, 1998), dismissed with prejudice by Order entered September 21, 1998.

BACKGROUND

The invention relates to a pay-as-you-use public terminal for accessing the Internet. The original application, as filed, disclosed a public terminal for accessing online service providers (such as Prodigy and CompuServe) and Internet providers, but all but three references to the Internet were canceled. The stated purpose of this reissue is to correct Patent Owner's error in deleting references to the Internet and claims to a pay-as-you-use terminal for accessing the Internet. The background of the invention in Application 08/376,247, as originally filed, describes (page 2):

In the past few years there has been a remarkable growth in the use of commercial on-line service providers (I.E. PRODIGY, COMPUSERVE, AMERICAN ON-LINE, and DELPHI), Internet providers and use of FAX machines. The use of the above listed services are normally conducted in the home or office.

Many businesses use E-mail (through an on-line service or the Internet) to conduct day to day operations In addition, businesses constantly draw from the wealth of data bases of information available from the on-line services and the Internet.

Commercial and Internet on-line members also access the services for personal and leisure activities These services are generally accessed from fixed site locations at home or in the office. Although, portable terminals (lap top computers) with modems are available; they are often cumbersome and are not user friendly for a travelling business people or other users of on-line services or the Internet on the road.

The current pay as you use FAX machine requires users to have a hard copy document to send; and virtually none are able to receive in a user friendly configuration. In many situations, it is impractical for a user to have a hard copy document in hand to send. This invention will allow a user to create a document on screen and FAX it out, as well as provide for a header and print out a copy of the message sent. A telephone will also be located in the terminal cubicle to instruct the sender to transmit a FAX to the terminal location.

An added feature of the terminal would allow for minor word processing at its terminal. This would be a highly desirable service for business people/individuals on the go that would require its service. . . .

After listing prior art patents, the background concludes

(page 4) :

Accordingly, there is no one device/apparatus that allows a user, to access, on a pay as use basis, such an array of one stop applications. The terminals would be located in such diverse locations as airports, hotels, business centers, libraries, hospitals, shopping malls and other locations as appropriate.

The object and advantages of the invention are described as follows (page 4):

Accordingly, besides the objects and advantages of this device/apparatus described previously in my patent, several objects and advantages are (some restated):

(a) Users can conveniently access commercial on-line services and the Internet at other locations other than from their fixed terminal at an office or home.

(b) Users can create, send and receive FAX's from the terminal.

(c) Users can conduct word processing operations and send the file via e-mail to another fixed terminal.

(d) Users can receive a hard copy document from a laser printer of any activity that they conduct at the terminal.

(e) Users will pay for the use of the terminal using a credit card swipe apparatus. The user will be charged for use of the terminal, telephone line use charges and additional charges by the commercial on-line service or Internet provider.

(f) Commercial on-line services and Internet providers will benefit greatly by the additional exposure/access of their services.

(g) Users will have the convenience of having easy access to the services provided by the terminal at a reasonable price; negating the need for frequent travelers to unnecessarily carry around a cumbersome laptop terminal with accessories for FAX'ing or conducting other on-line activities.

The apparatus is a "[t]erminal device which is comprised of the monitor, keyboard w/mouse, central processing unit w/internal modem (14.4 -28 BPS), integrating software, laser printer, credit

card swiping device, telephone and telephone lines" ('905 patent, col. 2, lines 42-46), as represented by block 2 in Fig. 1.

Figure 2, as originally filed, is reproduced below.

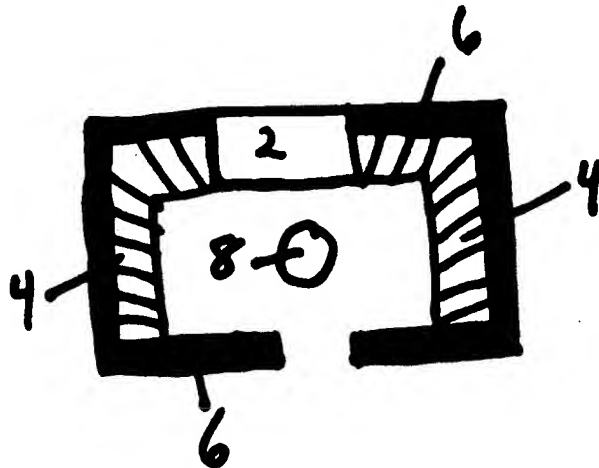


Figure 2 shows a top view of a cubicle surrounded by a wall 6 and having a desk top 4 holding the terminal 2 with a round stool 8 in front of the terminal. Patent Owner filed a substitute Fig. 2 showing the terminal in the form of a housing containing the terminal components, which the Examiner accepted and which became Fig. 2 of the '905 patent. The same Examiner in this application now has objected to Fig. 2 as new matter and has required that it be restored to the original figure (Final Rejection, p. 2).

Patent Owner responded (Amendment of April 24, 2002): "It would be obvious to some one skilled in the art that the words and meanings of 'terminal' and 'housing' are synonymous as portrayed

in the original disclosure. In, [sic] addition the prior art provided, demonstrates this contention. Where else would the components listed in the specification be housed?" (Emphasis omitted.) The Board has no jurisdiction to review "objections" to the disclosure under 35 U.S.C. § 132; the Board's jurisdiction is limited to those matters involving the rejection of claims. In re Hengehold, 440 F.2d 1395, 1404, 169 USPQ 473, 480 (CCPA 1971). Nevertheless, since Patent Owner is pro se, we note that the Examiner is correct because the original Fig. 2, as filed, did not show the components arranged in a unitary housing as in the substitute Fig. 2. The fact that references cited in the patent disclose components in a housing does not disclose that Patent Owner's components are in a housing. A "terminal device" does not imply a unitary housing, the various components of CPU, display, keyboard, printer, etc. can be separate components on a desk as with most home computers. The patent law is very strict about new matter in the specification and claims. A claim to a housing would properly be rejected for lack of written description since what would have been obvious is not the test for written description. See Lockwood v. American Airlines Inc., 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1968 (Fed. Cir. 1997) ("One shows that one is 'in possession' of the invention by describing the invention, with all of its claimed limitations, not that

which makes it obvious."). Patent Owner has properly canceled references to a "housing" in claim 6.

Claims 6-9 are reproduced below.

6. A public on-line, pay-as-you-use communications terminal comprising:

- a central processing unit (CPU);
- a telephone access node;
- an internal modem coupled to the CPU and telephone access node;
- a video display monitor coupled to the CPU;
- a keyboard for providing user interface coupled to the CPU;
- a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;
- means for accessing the Internet and allow for user interaction;
- software installed into the CPU to allow interface with the Internet and credit card service centers; and
- a printer coupled to the CPU.

7. The terminal of claim 6, wherein the means for accessing includes a keyboard which communicates with and controls a microprocessor.

8. The terminal in accordance with claim 6 also including program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. The terminal of claim 6, wherein the terminal comprises a CPU, monitor, credit card reader swipe device, internal modem and printer.

THE REFERENCES

The examiner relies on the following references:

Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).

VISION . . . POWER . . . VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).

Rawn Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.) (hereinafter "Shah").

The World Wide Web Conferences, 1994-1995 Kiosk Papers, <http://www.visi.com/~keefner/pdfs/twwwc.htm>, pp. 1-3 (of 113) (hereinafter the "1994-1995 Kiosk Papers") (not prior art).

THE REJECTIONS

We refer to the Final Rejection (pages referred to as "FR__") entered March 12, 2002, and the Examiner's Answer (pages referred to as "EA__") entered August 17, 2005, for a statement of the Examiner's rejection, and to the Revised Appeal Brief (pages referred to as "Br__") filed March 20, 2005, for a statement of Patent Owner's arguments thereagainst.

Dependent claim 7 stands rejected under 35 U.S.C. § 112, first paragraph, based on lack of written description for the limitations that a keyboard "controls a microprocessor" and for a "microprocessor" in addition to the claimed CPU.

Claims 6-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Exhibit E, Exhibit F, and Shah. The 1994-1995 Kiosk Papers article is cited to show that Shah was publicly accessible at the time of filing and, therefore, a prior art "printed publication." The Examiner finds that one difference between the subject matter of claim 6 and Exhibit E is that Exhibit E does not expressly disclose software to allow interaction with credit card centers (FR6). The Examiner finds that Exhibit F teaches the use of software to carry out communication functions and concludes that it would have been obvious to use software "within the TouchFax terminal of Exhibit E to carry out its communication functions with the credit card centers in order to authorize payments made via the credit card reader" (FR6). The Examiner finds that the difference between the subject matter of claim 6 and the combination of Exhibits E and F is that Exhibits E and F do not specify accessing and interfacing with the Internet (FR6). The Examiner finds that Shah teaches the desirability of providing access to the Internet in a kiosk-based information system to provide users with the many services on the Internet and concludes that "[i]t would have been obvious to an artisan of ordinary skill to incorporate such means for accessing and software for interfacing with the Internet in a kiosk information

system, as taught by the Shah article, within the combination of Exhibits E and F in order to provide users with access to the many services available on the Internet" (FR7).

DISCUSSION

Attachments

For convenience, a copy of the references and other documents mentioned are attached to this opinion, except for the videotape Exhibit C.

Written description

The written description requirement of 35 U.S.C. § 112, first paragraph, is used to reject when a claim is added or amended to recite a limitation without support in the original disclosure. See In re Rasmussen, 650 F.2d 1212, 1214-15, 211 USPQ 323, 326 (CCPA 1981). The specification must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. See Vas-Cath Inc. v. Mehurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991). Satisfaction of the written description requirement does not require the description to be in ipso verbis (in the identical words) antecedence in the originally filed application. See In re Lukach, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971).

Initially, it is noted that Patent Owner proposed canceling claim 7 (in response to the § 112 rejection) and claim 9 (in response to an objection that it was in improper dependent form for failing to further limit the subject matter of claim 6) by the amendment after final rejection received April 24, 2002, but the Examiner denied entry of the amendment.

The Examiner finds that the added limitation, "a keyboard which communicates with and controls a microprocessor," is not supported by the original disclosure because it makes no mention of the keyboard controlling a microprocessor (FR4).

Patent Owner refers (Br6-7) to the description of U.S. Patent 4,374,381 in the list of prior art in the '905 patent, which states "[a] touch terminal which communicates and controls a microprocessor" ('905 patent, col. 1, lines 43-44).

The Examiner responds that the original disclosure does not describe the keyboard controlling a microprocessor, because "[c]ommunication and control are two different functions" (EA7).

We will not sustain this reason for the rejection. Although a description of prior art is not a written description of the invention, the original disclosure does describe a keyboard connected to the CPU. One of ordinary skill in the art would find it inherent that a keyboard controls a CPU by causing it to

perform functions entered by the keystrokes. No new function is introduced.

The Examiner also finds that there is no provision in the original disclosure for a "microprocessor" in addition to the CPU already recited in claim 6.

Patent Owner does not respond to this reason.

We agree with the examiner that the disclosure does not discuss both a CPU and a microprocessor. Nor is it clear that the "microprocessor" and the "CPU" are intended to refer to the same thing. Because of the use of the indefinite article "a" in "a keyboard," it is not even clear that the keyboard is the keyboard in claim 6.¹ This appears to be a misuse of terminology by Patent Owner, but, nevertheless, the limitation, as presented, is not supported.

The written description rejection of claim 7 is sustained.

¹ Since Patent Owner is pro se, we explain that, as a matter of claim draftsmanship, the first time an element is introduced it is referred to using the indefinite article "a" or "an," and when later referring back to a previously mentioned element, it is referred to using a definite article, such as "the" or "said," so that readers know that it refers to the previous element. When an element is introduced the first time using a definite article, the claim is usually rejected under 35 U.S.C. § 112, second paragraph, as indefinite for "lack of antecedent basis."

The references are prior art "printed publications"

Patent owner argues that Exhibit E, Exhibit F and Shah are not prior art.

Whether a reference is prior art under 35 U.S.C. § 102 is a question of law. See Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1568, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). Whether a given reference is a "printed publication" depends on whether it was "publicly accessible" during the prior period. See In re Wyer, 655 F.2d 221, 226, 210 USPQ 790, 794 (CCPA 1981). A given reference is "publicly accessible"

upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation.

Id. (quoting I.C.E. Corp. v. Armco Steel Corp., 250 F. Supp. 738, 743 (S.D.N.Y. 1966)). The requirement of public accessibility can be satisfied under a variety of conditions, including when there has been a meaningful distribution, indexing, or display of the material to the public interested in the art. See generally In re Klopfenstein, 380 F.3d 1345, 72 USPQ2d 1117 (Fed. Cir. 2004).

The original purpose for the "printed" requirement, that printing increases the probability that a reference will be

available to the public, has largely been made redundant by changes in document duplication, data storage, and data-retrieval systems. See Wyer, 655 F.2d at 226, 210 USPQ at 794. "Printed publication" is now addressed as a unitary concept where "the question to be examined under § 102(b) is the accessibility to at least the pertinent part of the public, of a perceptible description of the invention, in whatever form it may have been recorded." Id. "[A] printed document may qualify as a 'publication' under 35 U.S.C. § 102(b), notwithstanding that accessibility thereto is restricted to a 'part of the public,' so long as accessibility is sufficient 'to raise a presumption that the public concerned with the art would know of [the invention].'" In re Bayer, 568 F.2d 1357, 1361, 196 USPQ 670, 674 (CCPA 1978).

A "printed publication" need not actually be seen by anyone; if the document was available and accessible so that a hypothetical person of ordinary skill in the art exercising reasonable diligence could have found it. The document is prior art because of its constructive placement into the public domain. Many of the cases on "printed publication" deal with the question of accessibility to the document by a hypothetical person of ordinary skill; that is, whether there is constructive knowledge by the public. See Bayer (unshelved and uncataloged master's

thesis accessible only to graduate committee prior to critical date not sufficiently accessible to public to constitute a "publication"); Wyer (application microfilmed and diazo copies deposited at five sub-offices of Australian Patent Office constitutes printed publication); In re Hall, 781 F.2d 897, 228 USPQ 453 (Fed. Cir. 1986) (single cataloged doctoral thesis deposited in a library in Germany prior to the critical date was a printed publication as of that date); In re Cronyn, 890 F.2d 1158, 13 USPQ2d 1070 (Fed. Cir. 1989) (undergraduate thesis deposited in college library open to the public but neither cataloged nor indexed in meaningful way is not a printed publication because it is not accessible to the public); Bruckelmeyer v. Ground Heaters, Inc., 445 F.3d 1374, 78 USPQ2d 1684 (Fed. Cir. 2006) (two canceled drawings remaining in Canadian patent's file wrapper were printed publications because a person of ordinary skill in the art interested in the subject matter and exercising reasonable diligence would be able to locate them).

Exhibit E

Patent Owner argues that Exhibit E appears on its face to be an article in the October 1992 journal entitled "Interactive World," but that he "has been unable to determine where to access 'Interactive World,' or what individuals had access to Exhibit E

at any time prior to the filing date of this application, i.e., January 23, 1995" (Br10). Patent owner argues that a "representative of the appellant searched the catalogs of Rice University and the University of Houston, two of the largest library collections in the fourth largest city in the United States and was unable to locate any journal entitled 'Interactive World'" (Br12) and "submits that Exhibit E is not prior art that can be cited against the claims of this application" (Br12).

The Examiner responds that Exhibit E is an article from the magazine "Interactive World," which is clearly a printed publication (EA7).

The Examiner does not address Patent Owner's arguments. On its face, Exhibit E is a printed magazine article, which is presumed to be distributed and publicly accessible. Nothing about Exhibit E suggests that it is not what it seems or that it was somehow fabricated for purposes of litigation. Patent Owner's statement that his representative was unable to find "Interactive World" in the catalogs of Rice University and the University of Houston is not in the form of an affidavit or declaration, but, in any case, looking in only two libraries is hardly evidence of reasonable diligence. The magazine is clearly a specialized publication that would not be expected to appear in every library. Several years worth of the magazine are in the

U.S. Patent and Trademark Office's (USPTO's) Scientific and Technical Information Center (STIC), although not for the year 1992. An article from the November/December issue of "Internet World" is applied in a new ground of rejection and includes the publication information page. Exhibit E is a prior art "printed publication."

Exhibit F

Patent Owner argues that Exhibit F is not prior art because (Br15):

No evidence has been provided by any of the Protestors or the Examiner as to where Exhibit F can be accessed by the public, or on what date Exhibit F became accessible to the public. Exhibit F may not have been disseminated to anyone outside of Protestor's organization at any time prior to January 23, 1995.

The Examiner responds that Exhibit F is one of a series of product brochures distributed without restriction and was available to the public in March/April of 1991, as evidenced by pages 54-56 of the Deposition of Daniel J. Toughey, President of TouchFax, in Mettke v. TouchNet, No. 98-PT-596-E (EA8).

Patent Owner ignores the evidence of Mr. Toughey's deposition. Exhibit 7 in Mr. Toughey's deposition corresponds to the present Exhibit F. Mr. Toughey testifies that the brochures for Exhibit 7 were distributed and made publicly available in March/April of 1991 (Toughey deposition, p. 55, lines 15-23).

Patent Owner's attorney, who deposed Mr. Toughey, could have asked further questions if there was any doubt as to the distribution of this document. As it stands, there is testimony under oath that the copyright date of 1991 for Exhibit 7 (now Exhibit F) is when the document became publicly accessible and Patent Owner had fair opportunity to challenge this date. To the extent Patent Owner somehow thinks that Exhibit E should be presently cataloged and accessible, we note cataloging in a library is only one of many ways to qualify as a printed publication. Exhibit F was accessible from, at least, TouchNet and, since it was distributed, it was accessible to the part of the public interested in such devices. Once something becomes a printed publication, it does not cease to be a printed publication just because it later may be hard to find a copy. Exhibit F is a prior art "printed publication."

Shah

Patent owner argues that the Shah article is not prior art because the Protestors and Examiner have not provided any evidence that it was accessible to a member of the public exercising reasonable diligence (Br16). It is argued that it appears that Exhibit I was only available on the World Wide Web and was not indexed or cataloged in any library or other location accessible to the public (Br16). It is argued that a person

would have to know the name of the author to have any chance of locating the article using a search engine on the World Wide Web, because any other key terms, such as kiosk and Internet, are too generic, and knowledge of the author of an article is rarely available to the searcher (Br16).

The Examiner responds that the Shah article is mentioned in the 1994-1995 Kiosk Papers document as a paper presented at one of the three World Wide Web conferences in May 1994, October 1994, and April 1995, and its date of April 30, 1994, is consistent with the conference in May 1994 (EA9).

We conclude that the Shah article has sufficient indicia of public dissemination and access to be a prior art publication or, at least, to shift the burden of production of evidence to Patent Owner to show that it is not. The Shah article is formatted and appears on its face to be a final paper prepared for the "World Wide Web Information Kiosks Special Interest Group" that was published, complete with author information and a list of references; it is not just a draft that one would not expect to be published. The Shah article is referred to in the 1994-1995 Kiosk Papers as having been presented at one of the World Wide Web conferences and there is no reason to doubt the truth of this statement by a disinterested third party. We agree with the Examiner that the April 30, 1994, date is consistent with the

First International Conference held May 25-27, 1994, but this is not expressly stated. Nevertheless, by process of elimination it must be one of the first two conferences held in 1994. While the 1993-1994 Kiosk Papers article can still be found on the World Wide Web, "<http://www.visi.com/~keefner/pdfs/twwwc.htm>," most links are expired except for "WWW Spring '95" to "The Third International World-Wide Web Conference," "http://www.igd.fhg.de/archive/1995_www95/." This 1995 Conference Web page has a list of papers and authors and the Shah article is not among them, so we conclude that it must have been presented at one of the two 1994 conferences. In addition, the Shah article was downloaded from a Web site, "<http://www.rtd.com/people/rawn/kiosk-paper.html>" (the same URL noted in the 1994-1995 Kiosk Papers), and an earlier 1994 Shah paper in the references also has a URL, which reasonably suggests that the Shah articles were both publicly available on the Internet as of the date on the article, although not downloaded until 2/3/99. Web pages on the Internet are "printed publications." Patent Owner's argument that Shah would have been impossible to locate on the Internet is mere speculation. There is sufficient indicia to indicate that the Shah paper was publicly accessible at one of the 1994 World Wide Web conferences and on the Internet to shift the burden to Patent Owner to further investigate. See In re Epstein, 32 F.3d 1559,

1570, 31 USPQ2d 1817, 1825 (Fed. Cir. 1994) (Plager, J., concurring) (It is unreasonable "to require the PTO examiners to do any investigation suggested by available information. Since more and more information is now available on computer databases, that could require a staff of investigators far in excess of the resources currently available to the PTO. At bottom, the issue in this case is who is to bear the cost of further investigation when further investigation is thought warranted. The solution agreed to by the panel, and with which I concur, is at least for now to allow the PTO to use its immediately available data sources to identify legitimate questions that need answering, and then to place upon the applicant the burden of finding those answers."). Shah is a prior art "printed publication."

Claim interpretation

It is noted that claims 6-9 do not require that the elements be in a housing.

The limitations of claim 6 that require interpretation are "pay-as-you-use" and "payment by a user for use of the terminal."

Claim 6 recites, in relevant part:

6. A public on-line, pay-as-you-use communications terminal comprising:

. . . .

a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and

a printer coupled to the CPU.

Patent owner argues that the references do not disclose charging users for terminal access (Br 17):

The Shah article does not disclose or suggest that a credit card swipe device should be employed to charge a user for use of the terminal. . . . Exhibits E and F were specifically directed to charging the user for use of the service, not for use of the terminal. Neither of these references contemplated the broader and more ingenious idea of allowing access to the Internet, and then charging the user for access to the terminal.

None of the references discloses or suggests charging users for terminal access. None of the references discloses or suggests the use of a credit card swipe device to access the Internet.

The Examiner responds that "claims 6-9 do not recite charging for terminal access" (EA9), but only "for use of the terminal." The Examiner states that "Exhibit E clearly teaches a credit card reader which accepts payment by a user for use of the terminal to carry out various services, e.g. facsimile communication, word processing, high-quality copying, fax mailbox service, electronic library access" (EA9).

We agree with the Examiner's interpretation that payment for services performed on the terminal is payment for use of the

terminal. The terms "pay-as-you-use" and "payment by a user for use of the terminal" are not defined in the claims or in the specification, as payment to get onto or access the terminal, and are broad enough to include payment for use of services conducted on the terminal. In claim 6, the "means for accessing the Internet" follows the limitation of accepting payment "for use of the terminal," and claim 6 does not expressly link payment for "use of the terminal" to "accessing the Internet." Payment for "use of the terminal" could be payment "for use of the terminal" to perform a different service, such as sending a facsimile, making a copy, printing a document on the claimed printer, etc.; i.e., claim 6 does not require payment for all uses of the terminal. The software for interfacing with the Internet and credit card service centers is for two different purposes and there is no express limitation of charging a credit card for access to the Internet. Nevertheless, to prevent controversy on claim interpretation, we interpret payment for "use of the terminal" to be payment for the service of accessing the Internet on the terminal.

Obviousness

Factual findings

Scope of the art

Patent Owner's disclosed field of endeavor appears to be best defined as pay-per-use public communication terminals, and the particular problem with which he was concerned in claim 6 was providing access to the Internet. Exhibits E and F relate to pay-for-use public communication terminals and are within the inventor's field of endeavor. Shah relates to providing Internet access in a public communications terminal and is in the field of public communications terminals and is at least pertinent to the problem of providing Internet access in a public terminal. There is no dispute that the references are within the scope of the prior art; i.e., that they are from analogous art. See In re Deminski, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986) (the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned); Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535, 218 USPQ 871, 876 (Fed. Cir. 1983) ("The scope of the prior art has been defined as that 'reasonably pertinent to the particular problem with which the inventor was involved'.").

Content of the references

Exhibit E discloses a free-standing pay-for-use TouchFax TF750 public communications terminal (kiosk) for locations such as airports, hotels, truck stops, and supermarkets (p. 48). Services include phone, fax, computer, word processing, copying, and information services. The TouchFax terminal has a microprocessor, a touch-screen monitor, a data port for modem and laptop connections, a full-size keyboard, and a laser printer (p. 49, left col.). "Payment for services is made using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping." (P. 49, left col.) The user can connect via a modem to the Official Airline Guide (OAG) database and receive a facsimile report (p. 49, right col.). Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49).

Exhibit F discloses a "TF700 Public Communications Terminal from TouchFax," in a stand-alone housing including a telephone, speaker, touch-screen monitor, a credit card reader for payment of services, a full-sized keyboard for "computer database access or word processing," an option panel, a flatbed scanner, a 386 CPU, and a laser printer. Services include "telephone, send or

receive a fax, photocopying, word processing and laser printing, and access to a growing number of information databases from Wall Street news to international sports scores." Exhibits E and F essentially describe the same terminal, the differences being that the TF750 had a sloped countertop instead of the flat countertop in the TF700, and the TF750 had the keyboard in the countertop instead of a motorized retractable keyboard in the TF700. See Deposition of Daniel Toughey, President of TouchFax, in Civil Action No. 98-PT-596-E, pp. 55-59 (Exhibit 7 in deposition corresponds to Exhibit F in TouchFax protest and this appeal, and Exhibit 12 in deposition corresponds to Exhibit E in TouchFax protest and this appeal).

Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract). Shah discloses that the advantages of using the Web are its popularity, it is already a multimedia tool, the user will have access to the many services on the Internet, and it is an accepted standard as opposed to a proprietary system (pp. 1-2). The kiosk includes input, output, processing, and network connection hardware, and Web browser software (p. 2 under "The Access Interface"). Shah states that entities that might implement a kiosk-based information system include "Commercial Information Referral organizations who wish to provide a paid

service through such kiosks" (page 3). Shah states (page 5):
"Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server."

Differences

The Examiner finds that one difference between the subject matter of claim 6 and Exhibit E is that Exhibit E does not expressly disclose software to allow interaction with credit card centers (FR6).

The Examiner finds that difference between the subject matter of claim 6 and the combination of Exhibits E and F is that Exhibits E and F do not specify accessing and interfacing with the Internet (FR6).

Level of ordinary skill in the art

Although examiners seldom make an express finding as to the level of ordinary skill in the art, the level of ordinary skill in the art is evidenced by the references. See In re Oelrich, 579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("the PTO usually must evaluate both the scope and content of the prior art and the level of ordinary skill solely on the cold words of the literature"); In re GPAC Inc., 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995) (the Board did not err in adopting

the approach that the level of skill in the art was best determined by the references of record); Okajima v. Bourdeau, 261 F.3d 1350, 1355, 59 USPQ2d 1795, 1797 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown.'"). Skill in the art is presumed. See In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

Objective evidence of nonobviousness

No objective evidence of nonobviousness has been presented.

Motivation

The Examiner finds that the communication software in Exhibit F suggests the use of communication software to communicate between the credit card reader device in Exhibit E and a credit card center.

The Examiner finds that Shah teaches the desirability of providing access to the Internet in a kiosk-based information system in order to provide users with the many services on the Internet (FR6).

Analysis

The claims stand or fall together with claim 6.

Patent owner argues that Exhibit E fails to disclose or suggest linking the facsimile kiosk with the Internet, and never discusses the Internet, much less accessing the Internet on a pay-as-you-go basis (Br12-14, Issue 3.A). It is argued that "Exhibit E does suggest that the kiosk may be used to access 'information databases,' but only in the context of receiving facsimile transmissions from these databases" (Br12) and, thus, Exhibit E lacks at least the claim limitation of "means for accessing the Internet." It is argued (Br13-15) that the Examiner errs in stating that Exhibit E teaches the limitation of "means for accessing commercial on-line services."

The Examiner responds that Shah is relied upon for its teaching of Internet access via a kiosk (EA8). The Examiner notes that "means for accessing commercial on-line services" does not appear in the Final Rejection (EA8).

Nonobviousness cannot be established by attacking the references individually where the rejection is based upon the teachings of a combination of references. See In re Merck & Co., 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986). That is, it is not persuasive to argue that Exhibits E and F do not teach Internet access when the rejection relies on Shah for this

feature, or to argue that Shah does not teach charging for use of the terminal services when Exhibits E and F are relied upon for this feature. Shah teaches, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. Shah suggests that consumers wanted access to the Internet for these services. One of ordinary skill in the art would have been motivated to provide Internet access as an additional pay-for-use service in the public kiosks of Exhibit E and F to achieve this advantage and consumer demand. Since Exhibits E and F have dates of 1992 and 1991, respectively, before the Internet became widely accessible, it is not surprising that they do not mention the Internet. However, technology is not static and it would be expected that the kiosks would be updated to incorporate improvements in technology, such as access to the Internet, that may not have been foreseen at the time. Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax to provide public online services and public Internet access as those features became common at home and business.

The Examiner did find that Exhibit E teaches "means for accessing commercial on-line services" in the first Office action of August 25, 1999, and the second Office action of June 11, 2001, but did not repeat it in the Final Rejection. It is the examiner's Final Rejection that is reviewed in an appeal under 35 U.S.C. § 134, see In re Webb, 916 F.2d 1553, 1556, 16 USPQ2d 1433, 1435 (Fed. Cir. 1990), but even if the statement had been in the Final Rejection and Examiner's Answer, it would not be reversible error unless it was critical to the merits of the rejection.

Patent owner argues (Br15, Issue 3.B): "Exhibit F fails to disclose, teach or suggest software installed into the CPU to allow interface with the internet and credit card service centers. . . . Furthermore, nothing in Exhibit F discloses, teaches, suggests, or even hints, that the facsimile kiosk is interconnected with the internet."

The Examiner responds that Shah is relied upon for its teaching of Internet access via a kiosk (EA8, two places). The Examiner states that Exhibit F discloses that "TouchNet network management software collects usage and billing data" and discloses a credit card reader allowing payment by major credit cards (EA8).

Neither Exhibit E nor Exhibit F expressly discloses software for interfacing with credit card service centers. Exhibit F states that "TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location." The "network management software" provides management functions and does not suggest communication with credit card centers. Nevertheless, we find that one of ordinary skill in the art of credit-card-based point-of-sale terminals at the time of the invention would have understood that connection of the credit card reader to a credit card center for authorization and charging is implied in both Exhibits E and F; indeed, we think that the average person was aware that credit card readers were connected to credit card centers for charge authorization. Patent Owner does not appear to contest that Exhibits E and F teach, or at least suggest to one skilled in the art, connection of the credit card reader device to a credit card center. As for connection to the Internet, the rejection is based on the combination with Shah, which teaches the use of Web browser software to provide access to the Internet. As discussed in connection with Exhibit E, nonobviousness cannot be established by attacking references individually where the rejection is based

upon a combination of references, and Shah would have motivated one skilled in the art to provide Internet access in a public kiosk environment.

Patent Owner argues that Shah does not teach the use of any software for interfacing with credit card service centers and there is no discussion regarding how a user would pay for the use of the kiosks (Br16). It is argued that the Examiner erred in relying on the commercial organizations at pages 3 and 5, because it is argued that "the commercial organizations' role with the kiosks is as an owner or the kiosk who charges users for the time display an advertisement" (Br16). It is argued (Br16-17):

The Shah article does not discuss the commercial organizations as providing any specific services, let alone charging for Internet access. Furthermore, nothing is disclosed in the Shah article regarding how these commercial organizations will be paid, let alone, the payment by credit card, at the physical location of the kiosk, utilizing software for interfacing with credit card service centers.

The Shaw article does not disclose or suggest that a credit card swipe device should be employed to charge a user for use of the terminal. The Shah article does not discuss the use of a credit card swipe device. It does not specify accessing and interfacing with the Internet.

The Examiner responds that Exhibit E provides a credit card reader to allow payment for services on the terminal (EA9).

Again, nonobviousness cannot be established by attacking references individually where the rejection is based upon a combination of references. We agree with the Examiner that

Exhibit E teaches payment for the use of terminal services using a credit card and credit card reader. Exhibit F also teaches these limitations. Shah states that entities that might implement a kiosk-based information system include "Commercial Information Referral organizations who wish to provide a paid service through such kiosks" (p. 3) and "Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server" (p. 5). Shah does not teach how payment for documents or services would be made, which is why Exhibits E and F are cited.

Patent Owner argues that there is no motivation for the combination, generally citing case law that there must be a reason to combine references (Br10-12; Br17; Br19).

The Examiner repeats the obviousness reasoning (EA10-11).

We conclude that the Examiner has established a prima facie case of obviousness, including motivation for the combination. Patent Owner provides no reason why one skilled in the art would not have been motivated to provide Internet access in the public kiosk environment of Exhibits E and F given Shah's teaching of a public kiosk to allow users access to the many services available on the Internet.

Patent owner discusses European Patent EP 0486160 A2, published May 20, 1992 (Br 18-19, Issue 3.D). The European Patent was cited by the Examiner in the Notice of Defective Brief entered July 13, 2004, (page 3) as pertinent, but not relied upon, as showing a multi-purpose facsimile transmission terminal, which is said to correspond to the TouchFax terminal in the TouchFax article (Exhibit E) and the TouchFax brochure (Exhibit F).

Since the European Patent was not made part of the rejection, it cannot be considered. The statement of the rejection must expressly contain a mention of all references applied in the rejection. See In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970); Ex parte Movva, 31 USPQ2d 1027, 1028 n.1 (Bd. Pat. App. & Int. 1993). The European Patent describes that the terminal is "credit card activated" (col. 1, line 23; see also col. 3, lines 9-10) and describes that "the computer operating program provides a charge by selection, such as fax services, a charge by time used, a charge by the number of pages sent or received, and a charge for the class of telephone calls, whether local, long distance or international" (col. 5, lines 28-32). Although these might be useful additional teachings in the rejection, these teachings

cannot be attributed to or used to fill in any blanks in Exhibits E and F and the Shah article.

Patent owner refers to a statement by Mr. Greg Adank, acting Director of Information Management, Fort Leonard Wood, Missouri, and states that "Mr. Adank has provided an independent analysis of the three items of prior art (Exhibits E, F and I . . .)" (Br20) and "has also provided a straight forward matrix in his analysis that crosswalks the elements of the Appellant[']s claims and the prior art cited by the examiner" (Br20).

The Examiner responds that the statement is not in affidavit or declaration form and is not considered (EA10).

It is not apparent that Mr. Adank's statement adds anything to Patent Owner's arguments. Mr. Adank finds that the TouchFax exhibits do not teach access to online services or the Internet and the Shah article does not teach offering access to the Internet on a point-of-sale basis (p. 6). The Examiner's rejection admits this much. Mr. Adank's statement does not address the questions of motivation and obviousness.

Patent owner argues (Br20-21): (1) the invention provides an unexpected result, specifically a point-of-sale terminal to access the Internet; (2) it was a crowded art; (3) the references do not suggest the modification; (4) the references do not teach what the Examiner says they do, specifically point-of-sale

terminal to access the Internet; (5) the Examiner relies upon a strained interpretation that could only be made by hindsight, as demonstrated by the Examiner's refusal to consider the matrix provided by Mr. Adank; (6) the invention solves a different problem than the references; (7) the Examiner has not provided a convincing line of reasoning as to why the subject matter as a whole would have been obvious; (8) the references do not contain any express or implied suggestion to be combined; (9) it would be necessary to make modifications not taught by the prior art to combine the references in the manner suggested by the Examiner; and (10) that fact that three references must be combined is unequivocal evidence of nonobviousness.

The Examiner responds to (1) that Patent Owner fails to provide any evidence or facts in support of the argument (EA10), and to (10) that the number of references does not, without more, weight against the obviousness of the claimed invention, citing In re Gorman, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991). The Examiner does not address the other points of argument.

We agree with the Examiner's response to (1). Mere allegations of "unexpected results" are not sufficient to show nonobviousness. An "unexpected result" is where the claimed invention achieves more than a combination which any or all of the prior art references suggested. We do not see how paying for

use of a terminal to access the Internet could ever provide an "unexpected result." We also agree with the Examiner's response to (10). Patent Owner's other arguments are token arguments and not persuasive. As to (2), Patent Owner has not demonstrated that it was a crowded art and, if so, how that should affect the obviousness analysis. As to (3), (4), (7), and (8), we find that the references do suggest the modification of adding Internet access to a pay-per-use public terminal. As to (5), it is not clear how the Examiner's refusal to consider Mr. Adank's statement can be considered evidence of hindsight; since we find motivation, the rejection is not based on hindsight. As to (6), Patent Owner has not explained how the problems are different, but, in any case, motivation in the prior art to combine the references does not have to be identical to that of the applicant to establish obviousness. See In re Dillon, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901-02 (Fed. Cir. 1990) (en banc) (holding that an invention may be obvious for reasons the inventor did not contemplate) (overruling-in-part In re Wright, 848 F.2d 1216, 6 USPQ2d 1959 (Fed. Cir. 1988)). In addition, if Patent Owner's problem is defined as how to provide Internet access in a public terminal, this is the problem addressed by the combination of references. As to (9), Patent Owner has not said what other

modifications, not taught by the references and not discussed by the Examiner, are necessary to arrive at the claimed invention.

For the reasons stated above, we conclude that the Examiner has established a prima facie case of obviousness, which has not been shown to be in error. The rejection of claims 6-9 is sustained.

NEW GROUNDS OF REJECTION PURSUANT TO 37 CFR § 41.50(b)

In view of the importance of this case, as evidenced by the two civil actions resulting from the '905 patent and by the three protests, as well as the age of this reissue, we feel that new grounds of rejection are appropriate to put the best prior art on record in a rejection and, in particular, to provide an express teaching of paying for access to the Internet.

References

The following prior art is cited in support of a new ground of rejection.

TOUCHFAX AMERICA, video tape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex in Atlanta, Georgia,² © 1993 TouchFax Information Services, Inc., (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA).

² See Deposition of Daniel Toughey in Mettke v. TouchNet, No. CV-98-PT-596-E, pp. 40-53, discussing Exhibit 5 to deposition.

TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).³

Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).⁴

VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).⁵

Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA) (hereinafter "L&G ISDN console").

Paul Gilster, The Internet Navigator (2d ed. John Wiley & Sons, Inc. 1994⁶), pp. 15-18, 24, 25, 56, 57, 195, 221-225 (hereinafter "Internet Navigator").

Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. cover, index (2 pages), 82-84 (hereinafter "Aliens").

On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis (hereinafter "On Haiti").

We conclude that all references are prior art "printed publications." TouchFax Exhibit C through Exhibit F were publicly distributed as discussed in the deposition of Daniel Toughey, President of TouchFax (pages of deposition noted in footnotes). TouchFax Exhibits E and F were also previously

³ Id. at pp. 20-25, discussing Exhibit 3 to deposition.

⁴ Id. at pp. 58-59, discussing Exhibit 12 to deposition.

⁵ Id. at pp. 55-56, discussing Exhibit 7 to deposition.

⁶ Published August 25, 1994, according to the copyright records at "<http://copyright.gov>."

discussed to be prior art. The L&G ISDN console brochure was publicly distributed as evidenced by the declaration of Adolf Deyhle (Exhibit E to Griffes Protest).

New grounds of rejection

Claim 9 is rejected under 35 U.S.C. § 112, fourth paragraph, as failing to further limit claim 6 from which it depends. Claim 9 merely repeats all of the elements of claim 6.

Claims 6-9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti, for reasons to be discussed.

Claim interpretation

We interpret "pay-as-you-use" and "payment by a user for use of the terminal" to require payment for use of the terminal to access the Internet.

Obviousness

Factual findings

Scope and content of the prior art

Scope

Patent Owner's field of endeavor appears to be best defined as pay-per-use public communication terminals, and the particular problem with which he was concerned was providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals and are within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access. Thus, we find the references to be within the scope of the prior art.

Content

Exhibit C is a videotape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex trade show in Atlanta, Georgia. The video tape advertises the use of the TouchFax kiosks for a variety of purposes including pay-per-use access to the Prodigy online computer service provider and for connection to the Internet,

although no kiosks had been built to perform these functions.⁷ Exhibit C, 1 is a printout of a video frame showing the opening title and production date of May 14, 1993. Exhibit C, 2 is a printout of a video frame showing a customer inserting a credit card into the TouchFax unit to activate the unit. Exhibit C, 3 is a printout of a video frame which specifically advertises connection to the Prodigy Information Service, a well-known online computer service provider in 1993. Exhibit C, 4 is a printout of a video frame which specifically advertises connection to the Internet. Exhibit C, 5 is a printout of a

⁷ See Deposition of Daniel Toughey in Civil Action No. 98-PT-596-E, pp. 44-45, indicating that video was a marketing tool, intended to show possible uses:

Q: (By Mr. Polasek [Attorney for Patent Owner]) Now that we have been able to stop the tape, it shows a rectangular gold block labeled [sic] internet. I think it is right at -- I thought it was the 36 second mark. It may be 34.

MR. STITT [Attorney for Defendant]: It appears to be 34.

Q: (By Mr. Polasek) Did that provide for access to the internet? If the user was to touch that icon, I guess it what you would call it, that portion of the TouchNet screen, does that enable a user to gain internet access or do you know?

A: Not at that time, no. That was like MCI mail above it. Those are possible uses for the system. And so the reason we built this video was to sell our systems. And so, again, the vision of TouchFax, TouchNet was its multipurpose information communication terminal that, depending on what our customers, whoever owned these things wanted to provide, they could provide that type of information.

video frame showing a user at a TouchFax unit using the keyboard and showing the credit card reader device. Exhibit C, 2 is a printout of a video frame showing a second display of the Prodigy Information Service being offered and being advertised in the video tape as an online connection option.

Exhibit D is a diagram teaching use of a TF750 Public Terminal as a data and communications system. Exhibit D teaches a system which includes a "TouchFax Electronic Library" which serves as a "Gateway to Fax & Computer Services." The computer services include an "on-line interactive data base" including "CompuServe, Prodigy" online providers.

Exhibits E and F have been previously described.

The Internet Navigator describes that the Internet is a network of networks, which is made from computers and cables (p. 15). The Internet provides many different applications or services, such as e-mail (electronic mail), file transfer, and remote login (pp. 24-25). Commercial online services,⁸ such as

⁸ "Online service provider" is defined in "http://en.wikipedia.org/wiki/Online_service," where the original meaning is what applied in 1994:

An online service provider, in modern usage refers to an entity which provides a service online. It can include internet service providers and web sites, such as Wikipedia's or Usenet (commonly accessed through Google Groups). In its original more limited definition it referred only to a commercial computer communication service in which paid members could dial via a computer modem the service's private computer network and access various services and

CompuServe, were centralized as opposed to distributed like the Internet (pp. 17-18). "[C]ommercial providers such as CompuServe, GENie, and Prodigy have all made Internet mail access available" (p. 16; *see also*, pp. 57, 195; e-mail at pp. 221-225).

Thus, many online service providers, such as Prodigy, provided access to the Internet via e-mail. The World Wide Web (WWW) is a collection of documents linked by hyperlinks and URLs (pp. 388-396) and is a service that runs on the Internet.⁹ The claims recite access to the Internet, not to the WWW, and are met by access to one service on the Internet, such as e-mail.

Aliens describes that online service providers such as America Online, CompuServe, GENie, and Prodigy were providing access to more features of the Internet in 1994. It is stated

information resources such a bulletin boards, downloadable files and programs, news articles, chat rooms, and electronic mail services. The term "online service" was also used in references to these dial-up services. The traditional dial-up online service differed from the modern Internet service provider in that they provided a large degree of content that was only accessible by those who subscribed to the online service, while ISP mostly serves to provide access to the internet and generally provides little if any exclusive content of its own.

⁹ "[T]he Internet and the World Wide Web are not synonymous: the Internet is a collection of interconnected computer networks, linked by copper wires, fiber-optic cables, wireless connections etc.; the Web is a collection of interconnected documents, linked by hyperlinks and URLs, and is accessible using the Internet. The Internet also provides many other services including e-mail, file sharing and others"
"http://en.wikipedia.org/wiki/Internet."

that many of the services have offered e-mail gateways to the Internet for some time; e.g., "Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time" (p. 83); "GENie has been offering an e-mail gateway to and from the Internet for several years, but nothing more" (p. 84); "Prodigy already has an e-mail gateway to the Internet ..." (p. 84). This qualifies as "access to the Internet." Aliens also describes that online services have charged hourly fees for Internet services (p. 84).

L&G ISDN console describes a free-standing ISDN (Integrated Services Digital Network, an international standard for switched, digital dial-up telephone service for voice and data) payphone capable of accessing Videotex services available to the general public. Videotex was the first attempt at interactive information delivery for shopping, banking, news, etc. Videotex uses a box and keyboard associated with a video display. Data are delivered by phone line and stored in the box as predefined frames with limited graphics that are retrieved by menu.¹⁰ The payphone has a telephone access node (required in a payphone); a credit card reader; a video display monitor; a keyboard; a modem (inherently required to connect to the Videotex service); means (software and hardware) to access commercial online Videotex

¹⁰ See "<http://en.wikipedia.org/wiki/Videotex>."

services; and must contain a microprocessor. "The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal." "For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data." "[Videotex] services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour." No printer is disclosed.

On Haiti describes that "'Cyberia' -- a 'cyberspace cafe' -- has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour." The computers for this cafe inherently must have a CPU, monitor, keyboard, modem, means for accessing the Internet and allowing user interaction, and software installed into the CPU to allow interface with the Internet. There must inherently be telephone access node to allow access to the Internet. Thus, On Haiti discloses payment for use of a terminal access to the Internet, but does not describe payment using a credit card, or a credit card reader swipe device connected to a credit card service center, and does not describe a printer.

Differences

The differences between the subject matter of independent claim 6 and the pay-for-use public TouchFax terminal of Exhibits E and F is that Exhibits E and F: (1) do not expressly disclose connecting to a credit card center; (2) do not disclose providing access to the Internet; and, so, (3) do not disclose charging for using the computer terminal to access to the Internet.

The differences between the subject matter of independent claim 6 and On Haiti are that On Haiti does not describe:

- (1) payment using a credit card via a credit card reader swipe device connected to a credit card service center; and
- (2) a printer.

Level of ordinary skill in the art

The level of ordinary skill in the art is evidenced by the references, as previously noted.

The references of record demonstrate that those of ordinary skill in the relevant arts knew: (1) pay-for-use public communications terminals providing for pay-for-use telephone, facsimile, computer, and communication services were well known, see Exhibits C-F and L&G ISDN console; (2) access to the Internet, at least to e-mail services on the Internet, was commonplace in 1994 and was provided by online service providers, such as CompuServe and Prodigy, see Internet Navigator and

Aliens; (3) online service providers were starting to provide access to more than e-mail services on the Internet in 1994, see Aliens; (4) charging for use of a public computer terminal to access the Internet was known, see On Haiti.

In addition, although not relied upon in this rejection, we note that Patent Owner's expert Mr. Adank described the knowledge of those of ordinary skill in the art in his "General Observations" (p. 1):

Typical home and business computers (Intel based 286/386 and other compatible class processors) were capable of performing all tasks and features described in your background description of prior art. Specifically, those systems were capable of sending and receiving faxes via internal or external modem, generating electronic documents and printing or faxing them to a remote terminal, communicate with on-line service providers (Prodigy, CompuServe, AOL), as well as to be used to communicate on the Internet via Internet service provider (ISP). The ability to couple a credit card reading device to a computer terminal was also common place during this time as many point-of-sale devices (i.e. cash registers) were in fact systems built from the core components found inside a computer terminal.

Objective evidence of nonobviousness

There is no objective evidence of nonobviousness.

Motivation

The motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all exhibits are from the same corporation, TouchFax, and expressly teach modifications,

variations, and improvements to a pay-for-use public communications terminal. Thus, the teaching of Internet access in Exhibit C suggests modifying Exhibits E and F to provide Internet access, and the teaching on providing access to online service providers in Exhibit D suggests modifying Exhibits E and F to provide access to online service providers.

Since Exhibit C to Exhibit F disclose pay-for-use public terminals, this suggests payment for use of any service provided by the terminal, including services that may be added later.

L&G ISDN console teaches connection of a credit card reader to a credit card center for authorization and collection of credit card charges, which expressly provides motivation for connecting credit card readers to a credit card center, if proof of this common fact is needed.

Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49), which suggests modification of the terminal to provide services on a public terminal as those services become common at home and business.

On Haiti discloses payment for use of a public terminal to access the Internet, which expressly provides motivation for charging for Internet access in other public terminals.

The Internet Navigator and Aliens teach that online service providers provided access to e-mail services on the Internet in 1994, which expressly suggests that any access to online service providers in 1994 would have provided access to the Internet.

Analysis

"[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art." In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). "The question is whether it would have been obvious to one of ordinary skill in the art, working with the . . . [prior art] references before him, to do what the inventors herein have done" Id. at 425, 208 USPQ at 881-82. The collective teachings of the references do not depend on the order in which the references are modified. See In re Bush, 296 F.2d 491, 496, 131 USPQ 263, 267 (CCPA 1961) ("In a case of this type where a rejection is predicated on two references each containing pertinent disclosure which has been pointed out to the applicant, we deem it to be of no significance, but merely a matter of exposition, that the rejection is stated to be on A in view of B instead of on B in view of A, or to term one reference primary and the other secondary."). We have applied more than the minimum number of references needed to meet the claims in order to provide evidence of the level of ordinary skill in the

art and motivation, and to show different ways to approach the obviousness question.

We approach the obviousness issue from two directions. First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we then show why it would have been obvious to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer.

(1)

Exhibits E and F describe essentially the same pay-for-use public communications terminal providing services of receiving and sending facsimiles, word processing, copying, and printing. Although Exhibits E and F do not expressly teach that the terminal connects the credit card reader to a credit card service, one of ordinary skill in the art of credit-card-based point-of-sale terminals at the time of the invention would have understood that connection of the credit card reader to a credit card center for authorization and charging is implied in both Exhibits E and F; indeed, we think that the average person was

aware that credit card readers were connected to credit card centers for charge authorization. Patent Owner did not contest that Exhibits E and F teach this feature. Nevertheless, L&G ISDN console teaches a credit card reader in a public communications terminal, which communicates with a credit card service center ("For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.") and one skilled in the art would have been motivated to add a connection to the credit card center in Exhibits E and F to provide authorization of cards and collect amounts charged for communication services. Exhibits E and F disclose "causing the printer to print a receipt or any other document available from a commercial on-line service," as recited in claim 8, because Exhibit E discloses "terminal provides a detailed printed receipt of the transaction" and can print documents such as flight schedules from the OAG database, a commercial online service, and Exhibit F teaches a terminal with a printer and access to commercial databases. Claim 9 adds nothing to claim 6. Claim 7 remains rejected as lacking written description, but, nevertheless, Exhibits E and F and L&G ISDN console all show a keyboard that controls a computer.

There are at least three reasons why it would have been obvious to add access to the Internet as a pay-for-use feature on Exhibits E and F.

(1) (a)

Exhibit C (see Exhibit C, 4) expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet.

(1) (b)

Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

Because Exhibits D, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to an online service provider. The Internet Navigator and Aliens describe that online service providers were providing access to at least Internet e-mail by 1994, and Aliens describes that the trend among online service providers in 1994 was to provide access to more Internet features than just e-mail. Therefore, Internet Navigator and Aliens would have suggested to one skilled in the art at the time of the invention that the online service providers on the TouchFax terminal provided Internet access via e-mail or, at least, that providing Internet access would have been obvious modification. In addition, Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49) and the application, as originally filed, acknowledges (as it must) that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax kiosk to provide communications services (e.g., online services and Internet access) in a public terminal as those features became common at home and business. Again, since the TouchFax terminal is a pay-for-use-of-services terminal, one skilled in

the art would have been motivated to charge for access to the online service provider which provides Internet access.

(1) (c)

On Haiti discloses charging for use of a public computer terminal to access to the Internet. One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

(2)

On Haiti discloses charging for use of a public computer terminal which provides access to the Internet, but does not describe payment using a credit card, or using a credit card reader swipe device connected to a credit card service center, and does not describe a printer. One skilled in the art of credit card transactions would have been motivated to provide a credit card reader to allow users to charge their credit cards for the convenience of the service provider as well as the user in view of Exhibits E and F and the L&G ISDN console. Connection to a credit card center was so well known that its use is considered to be implied in Exhibits E and F, but, nevertheless, the L&G ISDN console expressly discloses connection to a credit card center for authorization and charging. One of ordinary skill in the art would have been motivated to provide a printer

to the computer terminal in On Haiti because printers were used with computers to provide hard copy records of what was viewed, such as e-mails, and the use of printers with public computer terminals was known as evidenced by Exhibits E and F.

CONCLUSION

The rejection of claim 7 under 35 U.S.C. § 112, first paragraph, is sustained.

The rejection of claims 6-9 under 35 U.S.C. § 103(a) is sustained.

New grounds of rejection have been entered as to claim 9 under 35 U.S.C. § 112, fourth paragraph, and as to claims 6-9 under 35 U.S.C. § 103(a).

This decision contains new grounds of rejection pursuant to 37 CFR § 41.50(b) (2005). 37 CFR § 41.50(b) provides that "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."


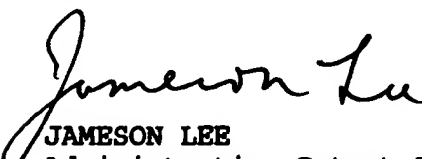
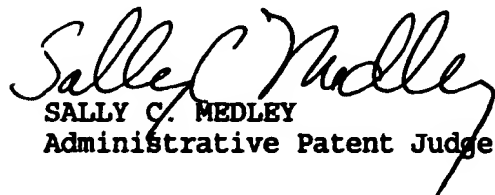
37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2004).

AFFIRMED - 37 CFR § 41.50(b)


LEE E. BARRETT
Administrative Patent Judge)
)
)

JAMESON LEE
Administrative Patent Judge)
)
)

SALLY C. MEDLEY
Administrative Patent Judge)
)
)

BOARD OF PATENT
APPEALS
AND
INTERFERENCES

ATTACHMENTS:

- (1) Rawn Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.)
- (2) The World Wide Web Conferences, 1994-1995 Kiosk Papers, <http://www.visi.com/~keefner/pdfs/twwwc.htm>, pp. 1-3 (of 113) (not prior art).
- (3) Black and white copies of Exhibits C,1 to C, 6, which are copies of frames from TOUCHFAX AMERICA, video tape recorded May 14, 1993.

- (4) TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).
- (5) Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).
- (6) VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).
- (7) Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA).
- (8) Paul Gilster, The Internet Navigator (2d ed., John Wiley & Sons, Inc. 1994), pp. 15-18, 24, 25, 56, 57, 195, 221-225.
- (9) Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. 82-84.
- (10) On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis.
- (11) Statement by Gregory W. Adank received April 24, 2002.
- (12) Declaration of Adolf Deyhle (Exhibit E to Griffes Protest)
- (13) Deposition of Daniel Toughey in Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed March 16, 1998), pp. 1-5, 20-25, and 40-59.
- (14) Background definitions from wikipedia.org (not prior art)

Internet: "http://en.wikipedia.org/wiki/Internet," p. 1/10.
Online service provider: "http://en.wikipedia.org/wiki/
Online_service," 2 pages.
Videotex: "http://en.wikipedia.org/wiki/Videotex." 4 pages.

Appeal No. 2006-0625
Reissue Application 09/134,831

Richard Mettke
7921 Panary Court
Reynoldsburg, OH 43068

Suggestions for Information Kiosk Systems using the World Wide Web

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The World Wide Web Information Kiosks Special Interest Group

30 April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superceeding other access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Introduction

A Kiosk-based Information system has many requirements to create the most user-friendly interface while maintaining security and functionality. User-friendliness is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

I
Attachment A -

- a multimedia tool is the primary type of program used by information systems because of the combination of text, graphics and sound are more appealing. The many different Web browsers have these capabilities already.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

"Web Design"

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such kiosks.

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as $t=\infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

The following are suggested requirements for an access interface based upon the above suggestions:

• Physical Requirements

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

• User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

The Server

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintainence. This may be expensive if network connect time charges are expensive.

Functionality

Functionality of the server is key to its success. The more special functions it serves and the greater the extensibility of the server program, the better its chances of success as a popular system.

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently not a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

contain restricted documents but data managers may wish to restrict certain areas of their Webspaces dependent upon their own criteria.

Control

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

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PLAY TOUCHFAX 00:00:00
Information Systems, Inc.
TOUCHFAX AMERICA

TIME 1:20
WITH MUSIC

Audio: Mono

Recorded: 5-14-93

VPR Creative Graphics 01:4

EXHIBIT

C, I

Index No. 519

310:31E

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EXHIBIT
C, 2

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TouchFax
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1 Year Rental

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EXHIBIT
C, 3

Page No. 5118

Intel Mail

Intelnet

EXHIBIT
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EXHIBIT
C, 5

Reel No. 8119

0:00:34:9



0:01:16:6

EXHIBIT

C-6

Sheng No. 5119

TouchFax

TouchFax Provides The Ultimate In Place-Based Interactivity

By Allen Weiner, Editor

If you think of TouchFax Information Services, Inc., as a company that manufactures public fax machines, you have only part of the picture. In the rapidly growing arena of place-based media, TouchFax is creating products that will allow consumers the same sort of interactive capabilities as they will have with their home-based interactive appliances.

"We believe the information for the machine can be strategically designed for the location type so the type of services and the type of information that can be retrieved interactively on our terminals can be totally different from one machine to another," says John Massey, the machine's creator and chairman of the Lenexa, Kan.-based company.

"We always will have a basic set of common services that are available on all machines," he adds. "But, particular machines will have unique sets of advertisements and promotions on them, as well as related services that relate to the type of people that frequent a particular type of location."

And locations are key to the TouchFax family of products. Massey believes they are best utilized in places where "a number of different types of users can interact with their desired and preferred telecommunications service." Airports, hotels, truck stops, apartment complexes and even supermarkets are ideal for these multi-functional, multimedia machines.

TouchFax hardware products include three models of public terminals used initially as pay-per-use fax machines. They also can provide other services such as word processing and high-quality copies in addition to its primary communications capability of phone, fax and computer. Service products include personal fax mailboxes and information services which may be accessed by TouchFax public terminals and any private fax machines.

The TF Series public terminals are location specific and are designed to meet the space in which they will reside. For example, a lower cost unit designed for lower traffic locations also has a smaller paper storage capacity and would require more frequent service calls if placed in a high traffic location.

All TouchFax terminals use proprietary



Best Available Copy

Attachment C 1

EXHIBIT

E

software to create an easy-to-use visual control panel. This user interface to the machine is displayed on a touch-sensitive color video monitor which provides instructions to the user and on-screen buttons to operate the terminal functions.

Documents to be sent are scanned on a jam-proof flatbed scanning device which operates much like a standard copy machine. Payment for services is made by using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping.

"It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

The TouchFax Electronic Library is a collection of information products organized by category. These information products are made available by combining information databases and high-resolution fax printer output with the ease of remote telephone communications. Information products are available on TouchFax public terminals and from any private fax machine.

On a TouchFax public terminal, the touchscreen provides an interactive dialog between the consumer and the information provider. For example, a consumer can select OAG FlightFax to get up-to-the-minute flight information, seat availability and fares. The consumer is guided through a series of video screens requesting their specific flight schedule. The TouchFax public terminal then sends the information via computer modem to OAG's database and a one-page personalized report is delivered to the TouchFax terminal by facsimile.

To access the TouchFax Electronic Library from your home or office requires a touch-tone telephone. A user responds to a series of audio prompts and directs the document to his home or office fax machine. For example, consumers can define the content of an up-to-the-minute special interest newsletter compiled from the news resources of *USA Today*.

Users also can request details of forecasters weather conditions in their destination city, maps and directions to specific locations, as well as city guides with suggestions on where to dine and what to see. Other services are oriented specifically toward entertainment and include popular business book summaries, personalized cartoon fax messages and event schedules.

In essence, TouchFax provides the future interactive appliance user a similar service to what he will be able to access with his Interactive Video Data Service terminal, touchscreen telephone or interactive cable device. So, home or away, the consumer can be interactive.

"The TouchFax is designed to emulate exactly what a person will be able to use in their homes," says Massey. "It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

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READER SERVICE NO. 29

(6)

VISION...

Leaders see the possibilities before they become obvious. The TF700 is designed with the understanding that the information age is just beginning. It incorporates the latest technology into an integrated system that can meet the communications needs of today and tomorrow.

POWER...

Every leader has a great mind. The "mind" of the TF700 is a powerful hardware/software system engineered to provide a comprehensive set of communication functions. TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location. The TF700 has the additional power to access other computer systems and enhanced fax services like our own InfoTouch™ electronic library.

VERSATILITY...

Leaders stay responsive to changing circumstances. The TF700 is a versatile platform that can adapt to take advantage of new technologies and opportunities, while meeting many present needs.

Public Fax has arrived.

The TF700 is the most complete solution to the needs of the rapidly growing public fax market. It provides high quality fax, jam-free operation and plain paper output in a convenient, self-service terminal.

Information Access is the key.

The TF700's self-instructing touchscreen interface encourages the general public to utilize the many information databases available.

Word Processing is a plus.

The full-sized keyboard offers the business traveler the perfect solution to composing and printing a letter or even personalizing a greeting card.

Video Advertising works.

The TF700's high-resolution color monitor provides a powerful medium to deliver advertising messages. In addition, each video ad screen can be linked to a printed coupon or sales literature that is instantly printed and delivered at the touch of a button.

TF

THE PUBLIC COMMUNICATIONS TERMINAL
OF TOMORROW... FOR INDUSTRY LEADERS TODAY.

TouchFax

INFORMATION
SYSTEMS, INC.

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Phone: (913) 599-6699 (800) 869-TFAX (8329) Fax: (913) 599-5588

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EXHIBIT

F

and quality built into their 11700 Public Communications Terminal from TouchFax.

The demand for public communication services is growing. Many of the largest telecommunications companies in the world have seen the handwriting on the wall. Several industry leaders have already responded by selecting TouchFax as their product of choice.

In the new TF700, TouchFax has combined precision engineering and powerful functionality to create the industry's most advanced personal communication center. At the touch of a few buttons, the new TF700 can put anyone in touch with the world through an extensive menu of essential services including:

telephone, send or receive a fax, photocopying, word processing, and laser printing, and access to a growing network of information databases from Wall Street news to international sports scores.

Handset and Hookswitch are AT&T quality, delivering high performance and durability.

External Speaker gives clear audio feedback of busy signals, fax tones, or voice prompts.

Access Door provides convenient access to internal components, extra paper and supplies.

Ergonomically Designed Cabinet with heavy-duty steel construction comes in a variety of finishes. Custom colors are available.

TF

Public Communications Terminal



14" Color TouchScreen Monitor

offers unrivaled ease of use and displays information and ads in sharp, brilliant colors.

Credit Card Reader

accepts major credit cards, phone cards, and can be programmed to accept custom cards.

Full-sized Keyboard

extends for computer database access of word processing, and retracts when not in use.

Option Panel

allows addition of floppy disk drive, optical card reader, laptop or modem connections.

300 DPI Flatbed Scanner

delivers high resolution with jam-free, photocopier-like operation.

386 CPU

with 40 megabyte hard drive, proprietary control interface and integrated fax and data/modem capabilities.

300 DPI Laser Printer

offers crisp, high-resolution printing on plain paper and an optional 700 sheet paper tray.

Compact Footprint

of just 24"W X 28"D lets the TF700 fit in almost anywhere.

TouchFax is a registered trademark. © 1991 TouchFax.

Touch

The Leader in Public Communications Systems

Now the information age is for everyone. The TF700 provides a friendly, touchscreen window to a universe of information available from on-line computer and fax information services. Never before has the public had easier access to such a wide range of printed information.

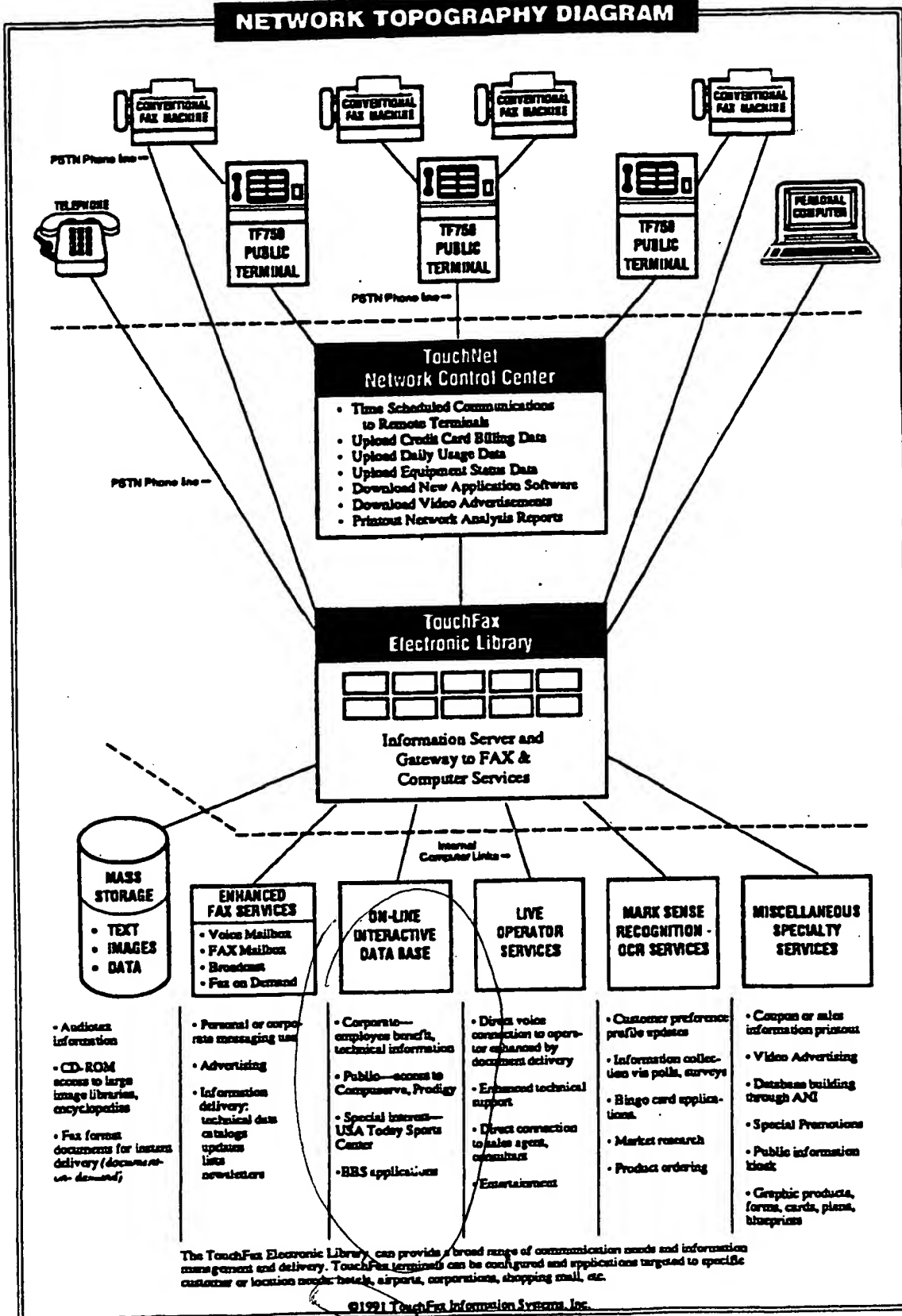
Best Available Copy

Attachment D-

(7)

TouchFax

NETWORK TOPOGRAPHY DIAGRAM



Best Available Copy

ATTACH

EXHIBIT

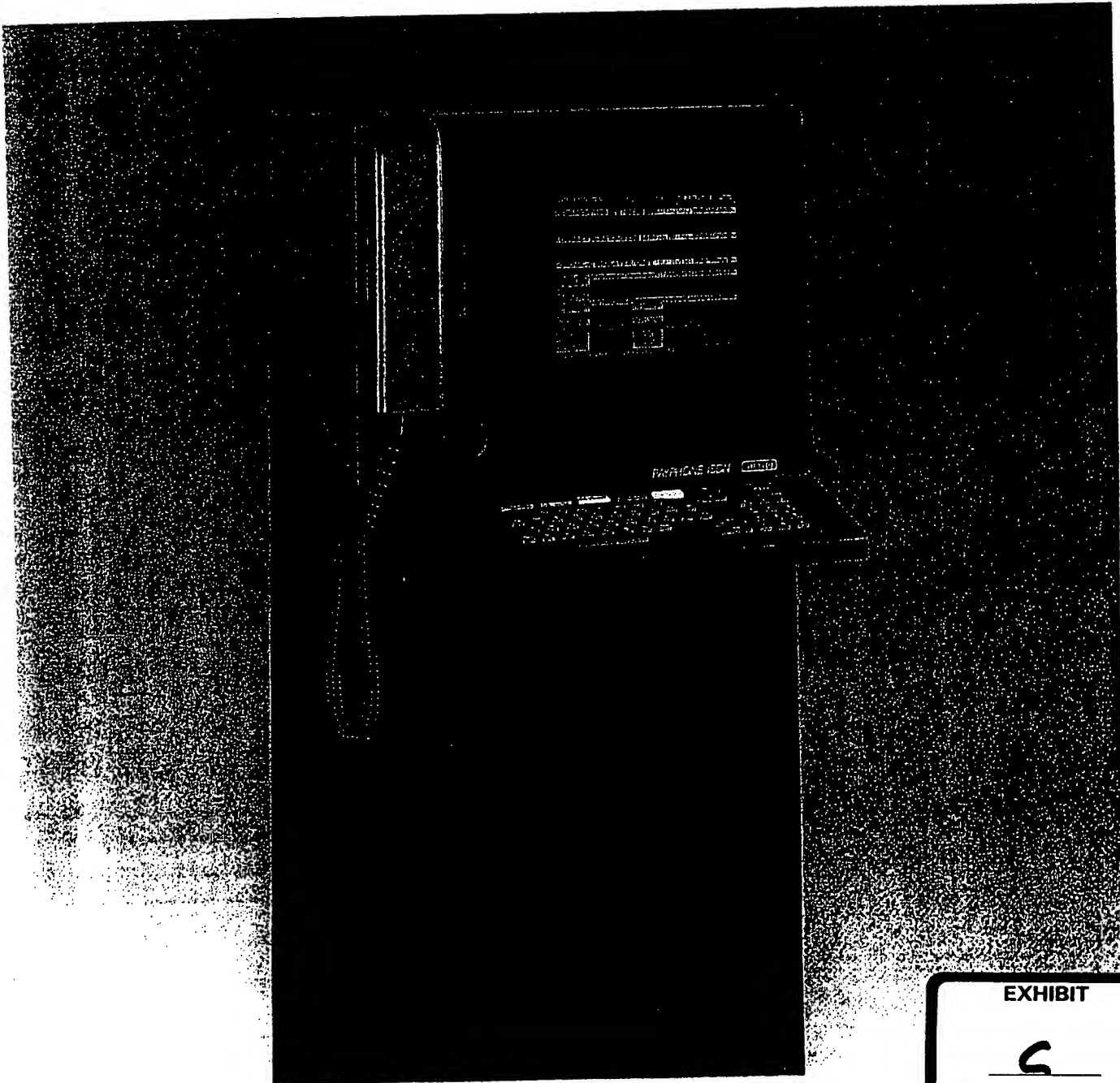
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- Attachment E

LANDIS & GYR

ISDN console

Public telephone and telematic console



EXHIBIT

C

ALL-STATE INTERNATIONAL

- Attachment F -



- Access to various new services and information sources
- Possibility of accessing a system operator specific data base
- Practical means of payment by means of cards
- Possibility of connecting a portable computer

Motivated by its policy of continuous innovation in telephone equipment, Landis & Gyr presents an advanced public telephone and telematic console, which illustrates the extensive range of services offered and whose role is to promote modern means of communication in crowded public places.

The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal.

Means of payment

Any of the main types of cards currently in use may be employed, namely:

- The Landis & Gyr optically coded pre-paid value card,
- The «smartcard» (card with microprocessor chip) or
- The commercial magnetic credit card

For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.

Multiplicity of services offered

New services are offered to the user:

- Consultation of Videotex type data bases on the colour screen
- Possibility of connecting a portable personal computer to the telematic console by means of a special infra-red connector, thus providing the possibility of accessing specialized data networks.
- Increased help for the user by the display of instructions and menus on the screen, presented interactively and clear identification of the selections by means of special coloured keys.
- Digital telephone, providing a quality that is superior to that of a conventional analogue telephone together with a shorter time for putting the call through.

Videotex

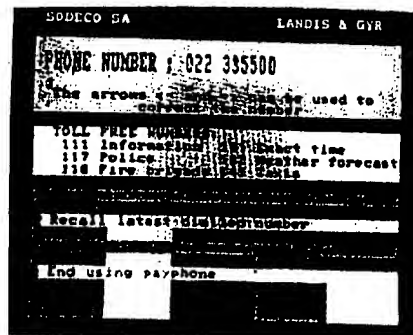
The user has no difficulty in accessing the Videotex services available to the general public (also called Minitel, Prestel and Bildschirmtext, depending on the country).

These services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour.

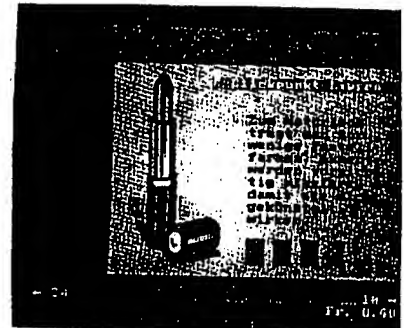
The various services already available include:

- Electronic telephone directory
- Electronic mailbox
- Telex transmission

- Timetables of means of transport
- Reservation of seats with certain airlines
- Reservation of hotel rooms, hire cars, places for cultural and sporting events
- Teleshopping
- Telebanking



Main menu — a colour is attributed to each choice; pressing the key of the same colour on the keyboard causes selection of the desired function



The Videotex standard enables pages with a high degree of graphics to be created.



Data base specific to the system operator

In addition to the Videotex data base, the user also has access to a specific data base, restricted to the users of Landis & Gyr ISDN consoles. This private data base, when it is installed, offers services restricted to a definite geographic region,

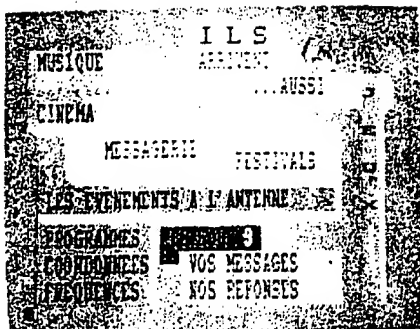
for example: nearest chemists, street directory, proposed route to reach a given address, nearest bus stops, etc.

An easily used source of local information is thus available to travellers and tourists.

Use of a portable personal computer

The Landis & Gyr ISDN console makes it possible to link up to a computer centre from a public place.

The services accessible from a portable personal computer are those that are currently accessible via the specialized data networks, termed packet switching networks or type X.25 networks.



Page for accessing the Videotex server of a local radio station

These services may be classified in two categories:

- Link up to a private central computer and use of the portable terminal as a remote terminal to transfer data or carry out any other operation on the central computer (e. g. transfer of the orders obtained during the day, from the memory of a commercial traveller's portable computer to the central computer of the company).
- Connection to value-added services available on host computers (e. g. private electronic mailboxes, reference library data banks).

Profitability

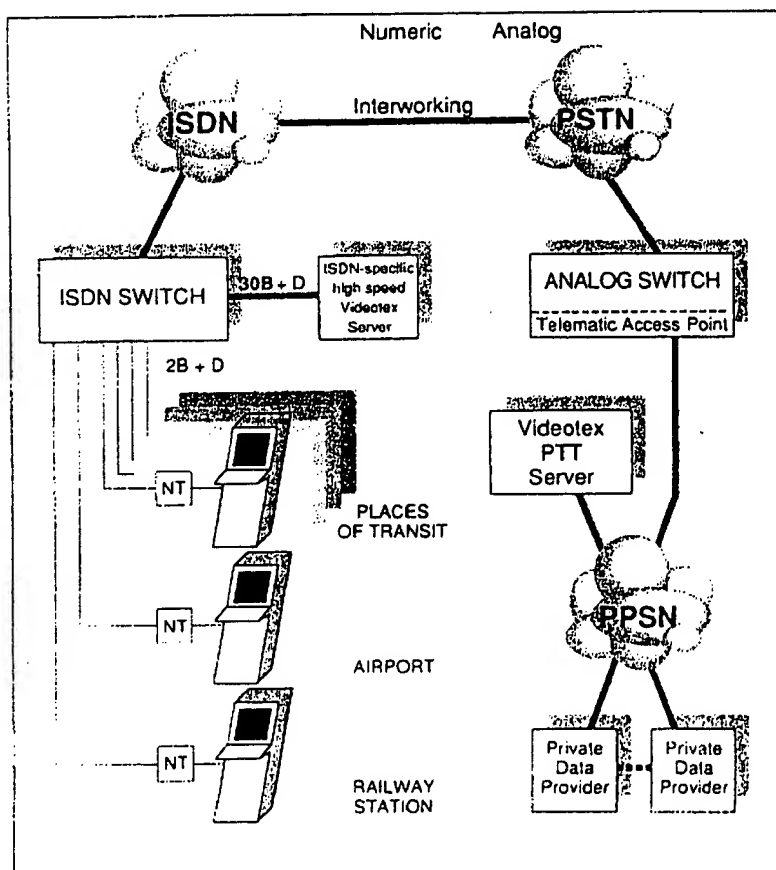
The operator of a system of Landis & Gyr ISDN consoles has considerable scope for making the investment profitable within a very short time:

- He may make a «private» data base service available to the public on a payment basis (value added service).
- He may also use the screen of the ISDN console for advertising purposes. It should be noted that when the screen of the Landis & Gyr ISDN console is not in use, which is the case in particular if the user is only making a voice communication, the operator may cause pages of advertising matter to scroll past on the screen. These advertising pages are generated by

the system operator at a distance and then loaded via the network. They may include a high proportion of graphics so as to achieve maximum visual impact.

Maintenance

Landis & Gyr has applied the concept of remote maintenance to its ISDN consoles. This concept has already proved its value in the range of conventional telephone stations (BTG Remote Management Systems).



ISE

Put

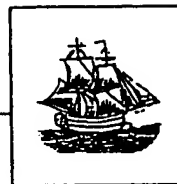


**Technical characteristics of
the Landis & Gyr ISDN console**

- Access to the ISDN S bus, with possibility of use in a multi-point configuration
- Management of communication protocol on ISDN channel D (LAP-D and Layer 3, according to I.441 and I.451)
- During transmission of data on channel B, use of the X.25 protocol (LAP-B, Layer 3 X.25)
- Access to non-ISDN Videotext type information providers, by means of a TA a/b adaptor, installed as an option
- Once the possibility of user data transfer on channel D is provided, this service will be made available, in particular for administration of calls made on credit.
- Access to certain additional ISDN services, such as call back, multi-party conference calls, provided these services are available on the network.
- Multiple means of payment:
Landis & Gyr prepaid value cards
Cards incorporating a microprocessor chip («Smartcards»)
Magnetic commercial credit cards
- Installation on semi-protected public sites
- Overall dimensions: 49 × 36 × 130 cm
- 9" colour screen
- Supplied from the mains

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Austria	Landis & Gyr GmbH, Breitenfurterstr. 148, Postfach 9, A-1231 Wien, Tel.: 0222/84 26 26, Tx: 132 7 06, Fax: 222/84 26 26 313
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Norway	Landis & Gyr A/S, Caspar Stormsvei 16, P. B. 6395 Etterstad, N-0604 Oslo 6, Tel.: 02/65 10 30, Tx: 78 346, Fax: 02/64 81 87
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South-East Asia	Landis & Gyr (S.E.A.) PTE LTD., 460 Alexandra Road 22-03, PSA Building, Singapore 0511, Tel.: 273 51 51, Tx: 55 782, Fax: 273 25 25
Spain	Landis & Gyr BC S.A. Batalla del Salado 25, E-28045 Madrid, Tel.: 1/467 19 00, Tx: 22975, Fax: 1/239 44 79
Sweden	Beving Elektronik AB, St. Eriksgatan 113A, Box 21104, S-10031 Stockholm, Tel.: 08/15 17 80, Tx: 10040, Fax: 336 863
Switzerland	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 16, Tel.: 022/733 55 00, Tx: 751 703, Fax: 022/733 52 19
United States	Landis & Gyr, Inc., 8 Skyline Drive, Hawthorne, New York 10532, Tel.: 914/347 26 30, Fax: 914/347 26 41
Other countries	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 16, Tel.: 022/733 55 00, Tx: 751 703, Fax: 022/733 52 19

LANDIS & GYR



THE INTERNET NAVIGATOR

SECOND EDITION

Paul Gilster

SCIENTIFIC & TECHNICAL
INFORMATION CENTER

FEB 25 1997

PATENT & TRADEMARK OFFICE



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The Internet Defined

The Internet is a vast, sprawling network that reaches into computer sites worldwide. By its very nature, this interlinked web of networks defies attempts at quantification. Some sources cite Internet penetration into over one hundred countries, with twenty thousand separate networks feeding into it containing more than 2.5 million host computers and twenty million users.¹ Other sources give higher user figures, citing fifteen million people in the United States and twenty-five million worldwide who have used the Internet.² Indeed, estimates about the Internet's growth are proliferating almost as fast as new host computers on the network.

Consider that by 1985, approximately one hundred networks formed the Internet. By 1989, that number had risen to five hundred. The Network Information Center of the Defense Data Network found 2,218 networks connected as of January 1990. By June 1991, the National Science Foundation Network Information Center pegged it at close to four thousand, and, as we've seen, connections have more than quadrupled since then. If we extrapolate based on current numbers, the Internet could reach forty million people by 1995, one hundred million by 1998. Its current growth rate is 100 percent yearly.

Couple that information with an estimated 120–150 million personal computers in use worldwide and you've created a situation with dramatic possibilities. Few of the desktop computers in the average home, for example, are networked together. But many home and business computer users would like to access the Internet's rich resources. The solution: a modem and a dial-up account.

Until recently, it was difficult to access the Internet on a dial-up basis, but the increase in Internet service providers has improved that situation. In the past year and a half, estimates John Eldredge of Performance Systems International, a major service provider in Reston, VA, the number of individuals connecting to the Internet by dial-up has increased from 50 to 80 percent.³ And

commercial providers such as CompuServe, GENie, and Prodigy have all made Internet mail access available. DELPHI and BIX have full Internet connections with access to all major services. Demand is intense. "We've seen an incredible response to our offering of full Internet services," says DELPHI general manager Rusty Williams. "It's been well received by current members and by other people looking for Internet service options—people in business, students, researchers, families."⁴ UNIX-based service providers tell much the same story of growth in the individual user market.

A BRIEF HISTORY OF THE INTERNET

The Internet's beginnings gave no hint that it would evolve into a publicly accessible network. Like many other great ideas, the "network of networks" grew out of a project that began with far different intent: a network called ARPANET, designed and developed in 1969 by Bolt, Beranek, and Newman under contract to the Advanced Research Projects Agency of the U.S. Department of Defense (ARPA).

The ARPANET was a network connecting university, military, and defense contractors; it was established to aid researchers in the process of sharing information, and not coincidentally to study how communications could be maintained in the event of nuclear attack. From humble beginnings—the ARPANET's founders originally contemplated letting only researchers log on and run programs on remote computers—the network grew. They soon added file transfer capabilities, electronic mail, and mailing lists to keep people interested in common subjects in communication.

But even as the ARPANET grew, other networks were under development, and it became clear that new methods of communicating would be necessary. As early as 1973, in an era of mainframe computing a decade before the desktop PC revolution took hold, ARPA, under its new acronym DARPA (Defense Advanced Project Agency)⁵ began a program called the Internetting Project. The goal was to determine how to link networks. Central to this concept of "internetting" is the need to overcome the different methods each network uses to move its information. When properly implemented, so-called *gateways* can be used to connect networks, passing traffic seamlessly from one to the other.

Finding the Right Protocol

Making internetwork links work requires the right protocol. In computer parlance, a *protocol* is simply a set of conventions that determines how data will be exchanged between different programs. Protocols specify how a network is to move messages and handle errors; using them allows the creation of standards separate from a particular hardware system. DECnet, for example, is a protocol used by networks running Digital Equipment Corporation computers; Novell, a familiar name in office networking, is another example of a protocol standard that allows computers to work together. Everything from the speed of the communicated data to the addressing schemes used to move individual message traffic is factored in the protocols used by a given network.

The Internet uses a protocol called *TCP/IP*, which stands for *Transmission Control Protocol/Internet Protocol*. IP is responsible for network addressing, while TCP ensures that messages are delivered to the correct location. These

powerful protocols were developed in 1974 by Robert Kahn, a major figure in ARPANET development, and now president of the Corporation for National Research Initiatives (CNRI), and computer scientist Vinton G. Cerf, now president of the Internet Society and vice-president of CNRI. Their pioneering work created the mechanisms by which the Internet could appear. In fact, if we are looking for a quick definition of the Internet, we can simply say that it is a network of networks that run the TCP/IP protocol suite.

If you will fall into the habit of thinking of the Internet as a metanetwork—a network made up of interconnecting networks—you will grasp the dispersed, decentralized nature of this enterprise. Around the world, connecting through special computers called *routers* and *hubs*, computers from different manufacturers running a whole range of operating systems can communicate with each other. Digital Equipment Corporation minicomputers can talk to Sun Microsystems workstations. Standalone PCs and Macintoshes can talk to Intel machines on office networks; they, in turn, can reach large-scale regional networks, which connect their high-speed circuits over a grid called a *backbone*.

You should realize that TCP/IP is not the only protocol for connecting a variety of different networks. The Internet is actually becoming a multiprotocol network, integrating other standards into its operations. Chief among these is *Open Systems Interconnection*, or *OSI*. Developed by the International Organization for Standardization (ISO), OSI has been widely embraced in Europe, where the momentum of TCP/IP has been less overwhelming than in the United States. Systems using other protocols likewise connect through gateways to the Internet; BITNET, for example, is a network that communicates using its own standards, but which is at least partially accessible to the Internet through such linkages. And the UNIX-to-UNIX Copy Program (UUCP) network connects thousands of computers by dial-up telephone lines; its electronic mail destinations are likewise available to the Internet user.

THE INTERNET VS. COMMERCIAL ONLINE SERVICES

Commercial on-line services like GENIE and DELPHI take an entirely different approach to distributing information. If you have been a user of one or more of these systems and now want to dial into the Internet, you must master the differences between the two models. CompuServe, for example, manages its huge user base through a centralized set of computers. When you call into local telephone numbers around the world to gain access to the system, you are connecting ultimately to a centralized set of resources. More telling is the fact that the commercial operation is managed from the top as a business. There is a company behind CompuServe, just as there is behind BIX and DELPHI.

Not so with the Internet, which has grown up free of both the advantages and problems caused by management from the top. This is why, when you connect to the Internet, you must choose from among a wide range of service options (we examine these in the next chapter). No central sign-up facility exists for the Internet; rather, you make contact with a service provider who allows you to gain access to the network through local computers. The consequences of this decentralization on network resources are likewise strong. What you find on the Internet depends on the decisions of thousands of system administrators around the world. No single company has made an

overall decision about network design, which makes mastering the search tools we will examine later a critical part of your explorations.

What Is Packet Switching?

Consider the great problem of networking diverse computer systems. You would like to move a stream of data from one computer across a communications link to others. How does the data get there, and how can we ensure that when it does so, it arrives in precisely the condition it was when it left? Can we be sure that our addressing scheme works, and that, in the event of a network failure, our data will be rerouted so that it reaches its destination? These are problems that network protocols must address. The Internet uses a scheme called *packet switching* to solve them.

Packet switching takes data and breaks it into parts, giving each segment a header with the necessary routing information. Computers on the network examine these headers and move the data packet along to the next site. Each time, the packet gets closer to its destination. A major bonus of packet switching is that the computers routing this data can select alternate routes when a given link fails (remember, this system was developed by researchers who were considering how to ensure reliable communications when parts of the network were destroyed in a nuclear conflagration). Another bonus: The computers at either end of a packet network connection can operate at different speeds; the network itself acts as a buffer to adjust for the difference.

You may also have run across the term *circuit switching*. Think of one-to-one contact here. If you set up a data session between two computers using ordinary telephone lines, placing a call whenever you need to move data, you would be using circuit switching. The method is useful when you need to connect computers to transfer large amounts of information. But because it requires you to set up a circuit dedicated to an exclusive use each time you use it, circuit switching is unable to handle the massive amounts of diverse data carried by the Internet. Complex applications requiring contact with multiple computers must rely on the packet switching model.

The Internet Emerges

In 1993, the U.S. Defense Communications Agency mandated TCP/IP for all ARPANET hosts. In doing so, it established a standard by which the Internet could grow. From this point forward, it would be possible to add more gateways, connecting more networks, while the original core networks remained intact. Most people date the true arrival of the Internet at 1983, the year when the original ARPANET was split into MILNET—to be used for military communications—and the ARPANET—for continuing research into networking. But, as early as 1980,⁶ CSNET, a network linking computer science departments in several states, became the first autonomous network DARPA allowed to connect to the ARPANET.

CSNET eventually merged with BITNET in 1989. The ARPANET itself was decommissioned in June 1990, its functions absorbed into the broader structure of the Internet. But the two networks had established a workable principle: let networks communicate by a set of protocols, with new networks being added to an ever-growing metanetwork communicating through gateways. That principle

depths of the world's fastest supercomputers to 1200 bps dial-up modems moving electronic mail traffic into some of the world's poorest countries. Clearly, a directory of all its constituent networks would be a massive volume which would quickly pass out of date. Users interested in tracking down network structure will, however, be interested in Tracy L. LaQuey's *The User's Directory of Computer Networks* (Digital Press, 1990) as well as John S. Quarterman's *The Matrix* (Digital Press, 1990); both are excellent starting points. And anyone seriously attempting to monitor network growth will learn that an active on-line presence is critical.

The Big Three Internet Applications

As Douglas Comer points out in his *Internetworking with TCP/IP. Vol 1: Principles, Protocols, and Architecture*, what you as an end user see of the TCP/IP protocols is a set of application programs that enable you to use the network to good advantage.¹² You and I don't need to know the intricacies of how TCP/IP functions, though if you're curious, there's no better or more respected guide than Comer's work. But running the programs themselves is not difficult, as we'll see.

Users of dial-up computer services, like users of bulletin board systems (BBS) and commercial on-line services, have come to expect certain capabilities from their providers, which the Internet provides in its own way through TCP/IP.

Here is how the Internet delivers these basic functions.

ELECTRONIC MAIL

Electronic mail is the most elementary service, and for many users, the most useful. Many people on the Internet have used nothing but electronic mail and still find the network indispensable. You can send messages to one or more people, deliver text files, retrieve information by automated computer programs like LISTSERV (through a gateway to BITNET), and more. While access to all three of the major Internet services is vastly preferable, it's possible to do quite a lot with electronic mail alone. A good thing, too, for aside from DELPHI and BIX, the only major on-line services with a full-fledged Internet connection, there is only limited access to the Internet from the other commercial services. That means, as we'll see in Chapter 3, you have three choices:

1. Learn to use the Internet through mail alone (Chapter 8 shows you how much you can do with such a connection).
2. Use DELPHI or BIX's full-service connection.
3. Get an account with one of the full-service dial-up providers discussed in Chapter 3 (more on these options there).

Ironically, in the early days of the ARPANET, electronic mail was considered an insignificant add-in to network capabilities. No one anticipated the high volume of traffic that began to flow as scientists exchanged ideas with geographically distant colleagues. Today electronic mail is taken for granted, from small companies with office networks to giant corporations linking remote offices worldwide. Its growth has been just as strong on the commercial networks, many of whose members maintain accounts solely for the e-mail connectivity they provide.

FILE TRANSFER

Moving files between computers is one of the handiest features of the networking revolution. If you can find something you can use—and if it's made publicly available, as are thousands of computer files on the Internet—you can transfer it to your computer. The process is called *file transfer protocol*, or FTP. You access documents made available to the public through a procedure called *anonymous FTP*. This procedure allows you to log on to remote computers and use the resources in directories the administrators have made available to the public. Anonymous FTP will be a major tool as we retrieve files and build an Internet library later in this book.

With FTP procedures, the Internet gets challenging indeed. Instead of consulting a single library source, as on CompuServe or GEnie, for a catalog of files, you are faced with thousands of computer sites offering programs and text files. To track down the program you need easily, you should learn about the access tools we'll discuss later. With them, you can locate programs, then use FTP to move them from the source computer to your service provider's computer at high speed, and subsequently download them to your own machine.

REMOTE LOGIN

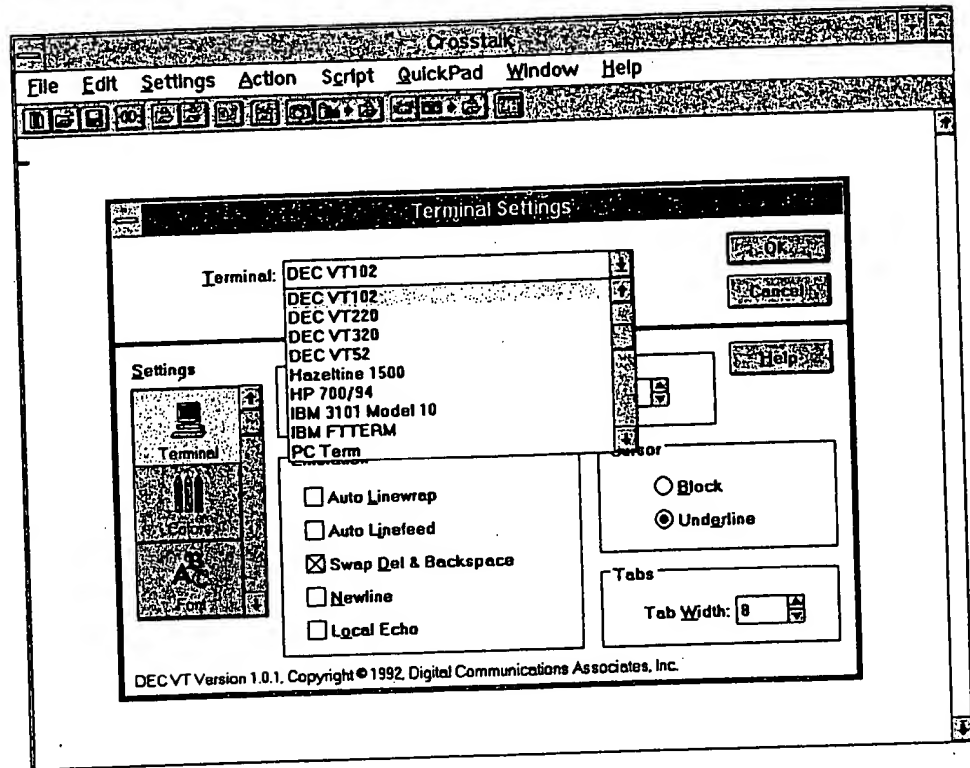
Remote login, otherwise known as Telnet, provides the ability to connect to a remote computer and work with it on an interactive basis. Again, the Internet opens the doors to a worldwide computing environment, on many of whose connected machines are services, databases, and other resources that can be examined and manipulated. By using Telnet, you can log onto the library catalogs of distant universities, look for information about everything from the formation of distant galaxies to recipes for potato soup, and examine Supreme Court decisions or the lyrics of popular songs. All the while, your computer will act as a terminal of the remote computer, which will respond to your command. In many cases, menu-driven systems at the other end make interactive sessions intuitive, but some systems are considerably easier to work with than others.

Note that when the network called "the Internet" is referred to in print, it always has a capital I. But you may also see abundant references, if you prowl your bookseller's shelves for computer books or read the computer press, to general terms such as "internets," "internetting," and "internetworking." Remember that TCP/IP can pass information among computers that aren't on *the* Internet. Your company, for example, might have local area networks in a number of sites. At some point, it would make sense for management to link those LANs together. One way of linking them is through TCP/IP. Your company would have established an *internet*, but you're not on *the Internet* unless you decide to be.

Public Packet Switching Networks

We have already discussed packet switching, and how it breaks messages into segments, each of which contains the necessary addressing information to ensure safe delivery. The ARPANET was the first major packet-switched network, running on an experimental basis for the use of DARPA contractors and not open to the general public. But as a dial-up modem user, you have probably encountered another form of packet switching, as used by networks like BT Tymnet or SprintNet. These public networks allow you to contact distant computers with a local telephone call; they then route your computer traffic to the appropriate destination.

Figure 3.1
Crosstalk for
Windows, terminal
emulation choices
from the Settings menu.



SIGNING ON—A PERSONAL ODYSSEY

Commercial access to the Internet has improved so dramatically in the past two years that newcomers will be startled to learn that there was a time when the process was excruciating, although many early treatments of the subject made it sound like a snap. "Need access? Just ask your system administrator," they blithely said, assuming you wouldn't ask if you weren't already working on a network in the first place. And indeed, if you were already on a network, the advice was sound. Many people to this day don't realize they can connect through their work site and that, in such cases, a simple request is usually enough to get them up and running.

But it was a different story for anyone who was trying to log on by modem from a standalone computer. For me, logging on to the Internet became something of a crusade, deepening into obsession as I continued to run into a stone wall. Several years ago, I made the mistake of asking this question: "I work out of a home office. I don't have Internet access and I don't have a system administrator. What do I do?" I asked people in my area and looked for answers on various on-line services. I peppered local bulletin boards for advice and called computer gurus in Research Triangle Park, pestering some poor souls for months.

The result? "Try the universities," some said. I called Duke, UNC, North Carolina State; access there was restricted and no one I spoke with knew how to get it. Maybe if I was a student. Unfortunately, my years at UNC had ended in the mid-1970s. "Call some of the big corporations," I was told. "Someone out there might be able to get you an account." I didn't know what I was doing, but

I began to make these calls. Most people didn't know what I was talking about. Those who did seemed incredulous that I would ask. "Network connections are private," they said.

Network connections private? If that doesn't give you something to think about, what does?

The Internet is not CompuServe or Prodigy. Lacking any central organization, the network has no billing address. You can't make a phone call to a network office and say, "Sign me up." You'll also get confused by the plethora of possibilities some of the people who are already on the network will tell you about. "Do you want a full connection?" they'll ask, and you reply, "Sure," not understanding why you would want anything else. "The best we can do is SLIP," you may hear. SLIP? What does it mean? And why do these people I'm talking to have nothing better to offer? Is SLIP some kind of restricted access?

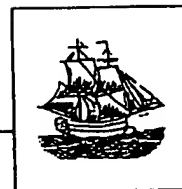
It wouldn't be until CONCERT-CONNECT came along that I made my real plunge into the Internet. CONCERT-CONNECT was a service provider which, among other options, made possible local dial-up access to the Internet. It brought order into the North Carolina Internet scene by offering a flat rate per month, allowing you to log on to the computers at MCNC (formerly the Microelectronics Center of North Carolina, now known solely by its acronym, as are many computer organizations). The flat rate was attractive, as were the services; not just USENET newsgroups, but FTP and Telnet as well; not just electronic mail, but the whole panoply of features that make the Internet so fascinating.

Today, CONCERT-CONNECT is gone. In its place are a growing number of Internet service providers, each offering dial-up access. Many also offer more advanced forms of network connection, including the aforementioned SLIP (which we'll discuss in this chapter), and other forms of direct links all the way up to high-speed dedicated T1 and T3 lines. My new service provider is Interpath, a division of Capitol Broadcasting Corp., here in Raleigh. Interpath is representative of the new breed of service provider, offering network connections to a great variety of customers from individual home users to the largest businesses.

What a change. In every state, service providers are springing up; indeed, Internet access is becoming a growth industry, bidding fair to create a price war that will be followed by an inevitable period of consolidation. For you, the individual or small business user, the good news is that prices are dropping across the board. CONCERT-CONNECT once charged \$175 per month for SLIP access; Interpath is now offering comparable service for \$37.50, and regular dial-up access is cheaper still. If it's a full-service access provider you're looking for, finding one will keep getting easier. No provider in your area? There will be soon.

Even more options are appearing from the ranks of the commercial on-line services like CompuServe and DELPHI. In fact, all of the major on-line services now offer some form of Internet connectivity, even if only a gateway that allows you to send and receive mail to and from the Internet. DELPHI and BIX have moved aggressively to open full-access provisions. America Online is beginning to widen its existing mail-only gateway with a host of new services including USENET newsgroups and access to the superb Internet interface and display tool called **Gopher**. Watch for announcements from the other commercial services; Internet access is now the hottest ticket in town as the networks grow together into a true global matrix.

We will work our way up the access ladder to show you what options are available. If you are already on the Internet, you won't need to read the following



Electronic Mail as a Gateway to the Internet

File Transfer Protocol and electronic mail are both key components of Internet connectivity, but what do you do if you only have an Internet mail connection? After all, with the exception of DELPHI, BIX, and America Online, the major commercial on-line services offer only mail connectivity. Fortunately, your on-line mailbox with a commercial provider like CompuServe or GENie can become a true gateway into the Internet. You won't be able to accomplish everything—in particular, Telnet simply can't be managed by mail alone—but if you are looking for files, you'll be pleased to know you can use electronic mail to retrieve them, without needing to employ FTP procedures yourself.

This chapter is devoted to people with accounts on the CompuServes and GENies of this world. Let's be clear on this: The optimum connection for a dial-up user is a full-access account with an Internet service provider, because it gives you the ability to use all three key Internet protocols—e-mail, FTP, and Telnet. But maybe you're hoping to shop around on the Internet first, to see what's available. Or perhaps you use CompuServe daily and would like to streamline your operations, running everything through your account there. Whatever the case, if you need to transfer files by mail, you can do it. The solution is workable, and while it's not exactly elegant, it does what you want it to do.



What You Need: A Background Document on Internet Faxing.

The Document: FAQ: How Can I Send a Fax from the Internet?

How to Get It: The document is posted regularly on the USENET news groups: alt.internet.services, alt.online-service, alt.bbs.internet, alt.answers, and news.answers. You can also receive new editions automatically by sending mail to this address: savetz@rahul.net, asking to be added to the distribution list.

FINGER BY MAIL

finger is a program we discuss in Chapter 14 which allows you to retrieve information about users and, in some cases, about a wide variety of information such as earthquake updates or popular music. Normally, **finger** is run as a program on your UNIX service provider's computer. However, you can also use electronic mail to send and retrieve the results of **finger** queries. To do so, send e-mail to:

`b.liddicott@ic.ac.uk`

In the **Subject:** field, put this command: `#finger user@site` where `user@site` is the address you want to reach. You will find a list of potential **finger** sites in Chapter 15's directory.

Suppose, for example, that you want to retrieve NASA headline news. The address is `nasanews@space.mit.edu`. Your e-mail request would then read:

`#finger nasanews@space.mit.edu`

placed in the **Subject:** field of the message. Sending this, you will shortly receive an update on NASA press releases.

SENDING ELECTRONIC MAIL TO OTHER NETWORKS

If you have any doubts that Internet electronic mail opens out to networks across the world, consider the evidence of John J. Chew's *The Inter-Network Mail Guide*, available on the Internet both as a posting in various USENET newsgroups and also by download with anonymous FTP. Chew tracks the ways in which the various commercial providers maintain links to and from the Internet, and his list is growing with each new posting. A glance through it reveals linkages to such varied providers as Geonet Mailbox Systems, BIX, GreenNet, KeyLink, PeaceNet, SprintMail, and AppleLink, to name literally but a few. Chew's list will come in handy, and I advise you to get a copy.

Now you will learn how to send mail from the Internet to addresses at the major on-line services.



What You Need: A List of Network Interconnections

The Document: **Inter-Network Mail Guide**, by John Chew

How to Get It: Through anonymous FTP to <ftp.msstate.edu>. The directory is *pub/docs*. The file name is **internetwork-mail-guide**. You can also keep up with changes to this document by monitoring the USENET news-groups **comp.mail.misc** and **news.newusers.questions**.

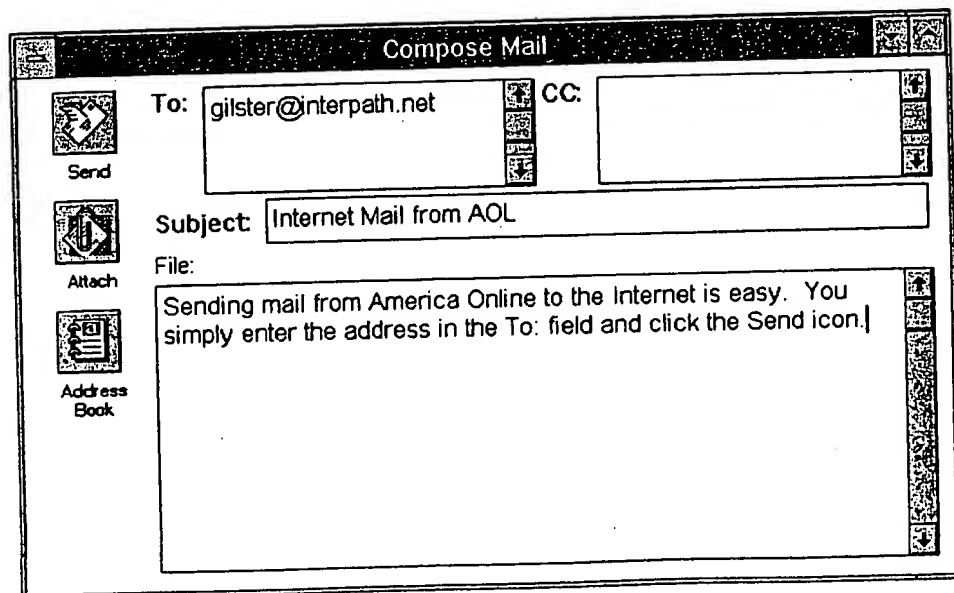
America Online

To send mail from the Internet to America Online, the syntax is **username@aol.com**. The user name should be all lowercase, with spaces removed.

Outgoing messages cannot be any longer than 32k. On the PC version of America Online, incoming mail cannot be any longer than 8k, which effectively prevents your using this service for **ftpmail** file transfers. On the Mac version of America Online, as well as the Apple II version and PC-Link, incoming mail cannot be any longer than 27k. All characters except newline and printable ASCII characters are mapped to spaces. Users are limited to seventy-five pieces of Internet mail in their mailbox at a time.

To send mail from America Online to the Internet, simply enter the Internet address and write your message. Figure 8.19 shows the process in action.

Figure 8.19
Sending a message to
the Internet from
America Online.



BIX

To send mail from the Internet to BIX, the syntax is *username@bix.com*. To send mail from BIX to the Internet, enter the Internet address preceded by **to at the Mail:** prompt. The following is an example of a message being sent from BIX to the Internet:

```
Mail:to gilster@interpath.net
Enter subject: Mailing from BIX
Enter text. End with '. <CL>
```

This message is to test BIX's connections to Internet e-mail.

```
send/action:send
Sending..Memo 76679 sent
```

There are no size restrictions on BIX messages to and from the Internet, and no monthly or per-message fee for Internet mail. You can move up to 10MB per calendar month (in both directions, to and from the Internet), without any additional charges. Beyond that, the charge is \$1.00 per 100k transferred. Messages can be up to 0.5MB in length in either direction; longer messages may be truncated.

CompuServe

To send mail from the Internet to CompuServe, the syntax is *usernumber@compuserve.com*. CompuServe user numbers contain commas, which must be changed to periods when you send from the Internet. Thus 12345,6789 becomes 12345.6789. To send me a CompuServe message, for example, you'd send to 73537.656@compuserve.com.

To send mail from CompuServe to the Internet, as just shown, lead off the address with **>INTERNET:** Sending a message to **ftpmail**, then, requires the address:

```
>INTERNET:ftpmail@decwrl.dec.com
```

DELPHI

To send mail from the Internet to DELPHI, the syntax is: *username@delphi.com*. To send mail from DELPHI to the Internet, use the word **internet** followed by the recipient's name (with no spaces in between) enclosed in quotes. On DELPHI, to send a message to **ftpmail**, for example, you would address it to **internet"ftpmail@decwrl.dec.com"**. The following is a sample message from Delphi to the Internet:

```
MAIL send
To:      internet"gilster@interpath.net"
Subj:    Test Message
Enter your message below. Press CTRL/Z when complete, or CTRL/C to quit:
Checking the DELPHI connection to the Internet.
^Z
```


GENie

To send mail from the Internet to GENie, the syntax is **username@genie.geis.com**. To send mail from GENie to the Internet: After entering the Internet address, you are prompted for additional GENie addresses, copies, and a subject line. You can then enter your text. Figure 8.20 shows a GENie message to an address on the Internet as it is being composed. GENie's Internet mail services cost \$3.00 per hour.

MCI Mail

To send mail from the Internet to MCI Mail, the syntax is: **username@mcimail.com**. MCI user names should have spaces removed. Thus **Sam Spade** becomes **Sam_Spade@mcimail.com**. Conversely, it's possible to use an MCI user number. If Sam's number is 123-4567, simply remove the dash. Thus **1234567@mcimail.com**. If there happens to be more than one Sam Spade in the MCI directory, you can reach the desired party by sending to:²

Sam_Spade/1234567@mcimail.com

To send mail from MCI Mail to the Internet, use the EMS option. Here's how to do it:

- At the TO prompt, type recipient's name and the word EMS in parentheses.
- At the EMS prompt, type **INTERNET**.
- At the MBX prompt, type the recipient's Internet address. Note: If the Internet address exceeds eighty characters in length, you must split the

Figure 8.20
Sending a message to
the Internet from
GENie.

```

Enter Destination GENie Address or C/R to continue.
?
Would you like to receive a copy of the message? (y/n) ?n
Enter the subject of your Internet message (max 30 characters) or C/R for no sub
ject:
<.....>
?Mailing from GENie

```

When you see the prompt, 1>, enter your message.
When you have finished entering your text, use the "S."
to send the Internet message. Use "X" to exit without sending.

Enter Internet text:

Queue#	Item	From	Length	Sent	Subject
1	6239343	GENIE.MGMT	268	93/05/27	New Pricing Effective July 1st

1>GENie prompts the user through the mail process, so sending mail to
2>the Internet is relatively simple. You will be prompted for additional
3>addresses for your message, asked if you'd like a copy of it, and given
4>space to enter a subject line.

address into multiple MBX lines. The split should occur at one of the following characters: @ ! %.

- Only one Internet mailbox may be used with an individual TO or CC recipient.
- Complete the mailing procedure as usual.

Figure 8.21 shows an example of sending a message to an Internet address from MCI Mail.

Prodigy

Prodigy is the huge commercial service created by IBM and Sears. To send mail from Prodigy to the Internet, you will need a program called Mail Manager. Jump to *About Mail Manager* while on-line to learn how to download it.

To send mail from the Internet to Prodigy, use the Prodigy user ID followed by the domain name. Thus, to send mail to **klbc98x**, you should address the message to **klbc98x@prodigy.com**.

MAILING LISTS AND ELECTRONIC JOURNALS

A huge variety of mailing lists is available to people with electronic mail access to the Internet. So much is available here that it would make little sense

Figure 8.21
Sending a message to
the Internet from MCI
Mail.

```

EMS:      INTERNET
EMS      376-5414 INTERNET                      NRI                      Reston

Enter recipient's mailbox information.

MBX:      mike_banks@bix.com

If additional mailbox lines are not needed press RETURN.

MBX:

TO:        Mike Banks
           EMS: INTERNET / MCI ID: 376-5414
           MBX: mike_banks@bix.com

Is this address correct (Yes or No)? y

CC:

Subject:   MCI Mail Check

Text: (Enter text or transmit file. Type / on a line by itself to end.)

Mike:

Please let me know if this message gets through OK.  It's routed to
your BIX account via MCI Mail.

Thanks!

Paul

```

internet

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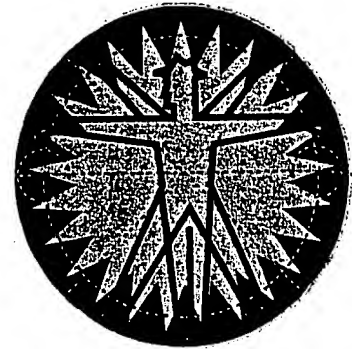
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- VIRTUAL ENCOUNTERS
- DIGITAL RIGHTS
- SUPERNATURAL SITES

CHATTER



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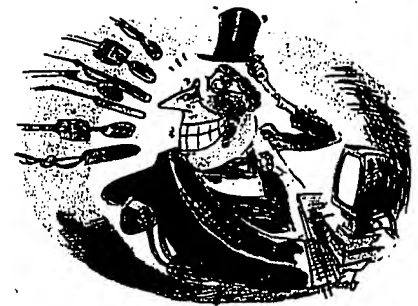
LETTERS TO THE EDITOR	4
FROM THE EDITOR by Michael Neubarth	6
INTERNET NEWS	10
INTERNET BOOKSHELF Edited by David Dean	104
POINTERS	106
INTERNET FORUM	108
INDEX TO ADVERTISERS	112



78

c o n t e n t s

99

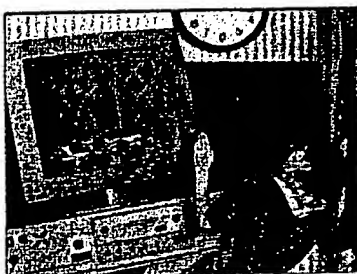


Columns

THE SURFBOARD by Andrew Kantor and Eric Berfin	14
NET PROFITS: Power Rap by Christopher Locke	18
INFO HOUND: Herbs, Ella, and IRC by Dave Taylor	22
ENTRY LEVEL: Learning the Ropes: A Usenet Style Guide by Andrew Kantor	24
DIVING INTO THE INTERNET: Internet: Going South by Joel Snyder	94
FOUND IT ON THE NET: Work or Play? by Linda J. Engelman	96
THE INTERNET CURMUDGEON: Painting the Right Picture by Daniel P. Dem	99
ARTIST AT LARGE: Going Graphical (There's No Place Like Home Page) by Kenny Greenberg	102

50

86



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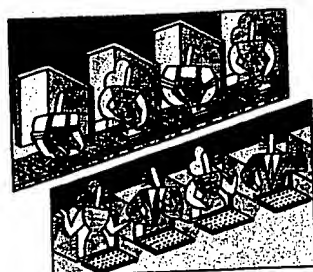
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64



18

Features

USENET: Past, Present, and Future by Dave Taylor	26
SECRETS FROM WITHIN USENET by Kevin Savetz	31
NEWSREADERS: An "n" User's Guide by Robert Sanchez	34
NEWSGROUP CULTURE by Robert Sanchez	38
DOUSING FLAMES by Kristina Harris	42
VIRTUAL ENCOUNTERS by Thomas Barrett & Carol Wallace	45
THE EX FACTOR by Brad Stone	50
GABFEST—INTERNET RELAY CHAT by Aaron Weiss	58
ALL THE NETNEWS THAT FITS Interview with Brad Templeton of ClariNet by Jeff Ubois	64
SERVING ADS by Joseph Raben	70
ANATOMY OF LISTSERV by Karl Signell	76
DIGITAL RIGHTS by Jean Erhard	78
ALIENS AMONG US by Andrew Kantor	82
WHY TEACHERS FEAR THE INTERNET by Crawford Kilian	86
SUPERNATURAL, STRANGE, AND SINISTER by David R. Noack	88

COVER: ILLUSTRATION BY TERRY ALLEN

Aliens Among Us

A horde of new users from America Online, CompuServe, GENie, and Prodigy is coming onto the Internet.

By Andrew Kantor

If you listen carefully, you can hear the grinding of gears and the creak of metal. The big guns of the on-line world—America Online, CompuServe, GENie, and Prodigy—are slowly turning and taking aim at the Internet, and cyberspace will never be the same.

For users of these services, the next few years will see the opening of a doorway (gateway, rather) to a vast and almost uncharted resource. For veterans of the Net, it means an influx of new users (often referred to in a less-than-friendly tone as "clueless newbies") that puts the college September Rush to shame.

There has already been a test case: a virtual sacrifice to the gods of the Net, if you will. America Online (AOL) expanded its Internet services in March 1994, making Usenet Newsgroups accessible to its users. But those users quickly learned the hard way that the Internet did not have an enforced Terms of Service to keep users friendly. They were faced with a barrage of verbal attacks. Their crime? Simply not knowing where to post their messages. But on the Internet, ignorance is never an excuse, and there is no friendly sysop only an instant message away.

Of course, from the Internet users' point of view, thousands of postings from aol.com were suddenly invading the Usenet, often in inappropriate newsgroups. ("Someone searching for family in Oregon should know enough not to post in alt.best.of.internet," says one Usenet veteran.)

America Online learned some valuable lessons that the other services should take to heart before taking the

leap beyond their cloistered walls. The most important? That explaining to users what they're getting into may save them a lot of time and trouble . . . and a good deal of embarrassment.

But AOL is not the only service with Net-related troubles. Prodigy opened a local Internet bulletin board so its users could discuss the global computer network. But somewhere along the line a signal got crossed, and users thought the bulletin board *was* the Internet. Messages to the tune of "Hi, I'm in Nebraska. Is anyone out there?" propagated the board, as more savvy participants tried to explain—with limited success—what was going on. So Internet citizens, fresh from dealing with 650,000 spanking new AOL users, dread the impending flood from Prodigy's and CompuServe's four and a half million total subscribers.

America Online: Act II

Despite some problems with quirky Usenet software (it posted some users' messages up to a dozen times) and untrained users, America Online has weathered the storm, and now is ready for the next step. AOL now offers a Gopher client and limited access to some WAIS databases. FTP and telnet services also are planned, although no date has been set, according to managing editor Kathy Ryan. "We've been driven by what our customers ask for," she said.

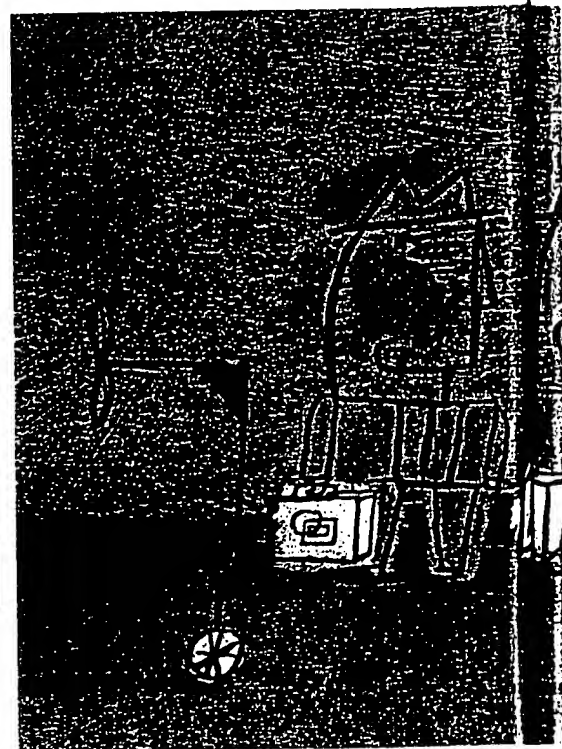
However, AOL's Gopher and WAIS services won't look familiar to veterans of the Internet, and not just because of the graphical look. The two applications have been combined under a single interface: a Gopher-like series of menus that present either text files or other menus. In addition, AOL is limiting the Gopher

information it will make available, and users will only be able to easily access Gopher services that AOL's editors have chosen. Veronica searches also are limited: You cannot choose the server to search. And WAIS searches will not return the relevancy information the system is known for. Thus, AOL's combined Gopher/WAIS offering is a watered-down version of both applications that seems to promise more than it delivers—a charge AOL has faced before.

AOL has been courting partners to increase the services it provides. An alliance with publisher Simon and Schuster, for instance, will allow AOL to offer College Online to provide e-mail and other resources for students and educators as an alternative to the Internet.

Another service being tested is a TCP/IP connection that will enable users to access AOL through an office LAN or via a SLIP or PPP Internet connection. The beta software is only available for

Illustration by James Yang



Macintosh users, and is located at AOL's anonymous FTP site, ftp.aol.com, in the /mac directory. The file is called TCP-for-Mac-AOL-2.1.sea; a README file provides instructions. (AOL's standard Macintosh and Windows software is also available at that site.)

On the Usenet front, complaints about AOL users continue to mount. According to Ryan, "(the reaction) wasn't surprising. When we came onto the Internet, I believe we came on as the single largest site, and we did have some members who didn't understand netiquette." But that's changed now, she says. "I think AOL has done more to educate its users than anyone else." For instance, the service now has unofficial "Net buddies"—Internet-savvy users who monitor Usenet and inform newcomers when they violate netiquette.

America Online's users are not entirely to blame, according to some. AOL software makes it difficult to reply by e-mail (users must post personal follow-ups instead) and users cannot include original message text in their replies. AOL users also must pay \$3.50 per hour to use News because there is no off-line newsreader. That means, as one user puts it, that they must pay to think; the more they think about what they write, the more it costs.

In late August, thanks to an aggressive campaign of giving out free trial

accounts, AOL claimed to have reached the one million subscriber mark, making it slightly less than half the size of CompuServe or Prodigy.

CompuServe: Slow and Steady May Win the Race

While AOL was opening its doors to let its users out, CompuServe's first step was to let its users in, by allowing users to telnet to their CompuServe accounts from the Internet. CompuServe can do this for one simple reason: Its service is text-based (although graphical front ends are available) and thus well-suited for use through one of the Internet's typical terminals.

Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time, but it charges for e-mail usage beyond a certain volume: After about 60 free three-page messages each month, users must pay approximately 5¢ for each 1,500 characters they send or receive.

CompuServe recently gave its users access to Usenet News, and provided plenty of warning signs along the way ("This information originates *outside* of CompuServe, and CompuServe therefore claims no responsibility for the content."). However, CompuServe's Usenet software suffers from some of the same problems as America Online's. Most obvious is the inability to automatically insert text from an original message into a follow-up message.

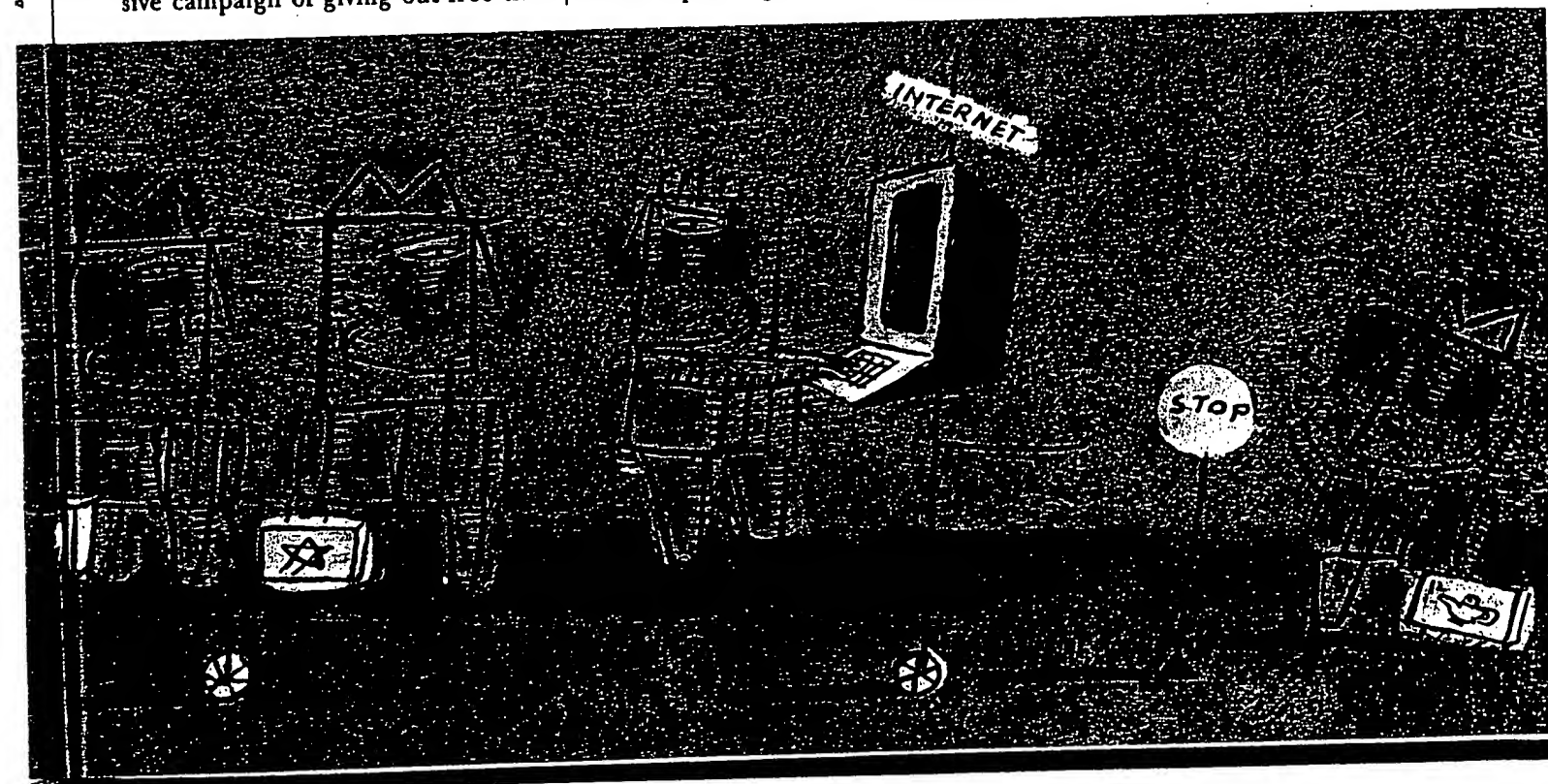
CompuServe's Usenet software betters AOL's in one way: When you choose to reply to a message, the default settings send the reply through e-mail only, and not into the newsgroup—a feature many Usenet residents will appreciate.

While seeking to protect the Internet from breaches of netiquette by its members, CompuServe also is trying to shield its members from any perceived offensive aspects of the Internet. Scroll through the lists of available newsgroups on CompuServe, for example, and alt.sex is nowhere to be found. However, you can subscribe to the newsgroup by typing in the name yourself.

Choosing a group from one of CompuServe's lists is no piece of cake. You must slowly scroll through hundreds of listings in alphabetical order. For example, to find alt.tv.something, you must make your way through everything from alt.1d to alt.travel.roadtrip.

And if you happen to subscribe to one of the ".binaries" newsgroups, where people post encoded pictures, sounds, or movies, the newsreader software offers no means to decode them. America Online left out this function as well, much to the chagrin of the people who frequented those groups.

According to Dave Bezair, CompuServe's senior product manager, the service is planning several other new Inter-



"Our intention is to be very clear with our members about what the Internet is—to make them aware that they're leaving this world."

net-related features, but does not want to release too many new offerings at one time. "The tremendous press coverage of the Internet has raised expectations sky high," Bezaire says, "so we want to avoid overhyping it in our community before it's available."

Bezaire would not comment on what else might lie ahead for CompuServe. "Our philosophy is to bring Internet services forward on an incremental basis—manage the process, manage the service, and educate the community," he said. "As we release additional Internet products and services, I want it to be a satisfying experience for all our members."

GEie: Holding Its Ground

GEie has been offering an e-mail gateway to and from the Internet for several years, but nothing more. That's the way it will likely stay "for the foreseeable future," according to Vivian Kelly, media relations specialist.

As on AOL, e-mail on GEie is free and unlimited. And GEie users are not entirely cut off from the Net: It offers an Internet RoundTable, in which sysops will gladly search for and retrieve files if requested by users, and will even scan files for viruses. But Kelly says that GEie has been reluctant to offer full Internet access because the service is part of General Electric Information Services (GEIS) and its corporate customers have concerns about security.

Prodigy: In Time, All Things

With more than two million individual users, Prodigy is the world's largest on-line service, and it is preparing to open its door to the Internet—albeit slowly.

Prodigy already has an e-mail gateway to the Internet, although users must acquire separate software to send and receive messages. But that's going to change,

according to product manager Bill Day, who said that basic Internet e-mail capabilities would soon be integrated into the software. "We're reorganizing Prodigy to put more focus on the Internet," Day explained. "We're very excited about it."

The next phase of Prodigy's Internet access will be some refinements to the e-mail software, and access to Usenet News. And Day said the service had given a lot of thought to how Prodigy users would react to the Internet, and vice versa. "We've been thinking about how we should educate our people on how the newsgroups operate. We need to cover How do you behave, and What do you not do?"

Prodigy will try to lessen the force of the impact—if not the scope—in several ways. First, it will cache Usenet News on its own server to reduce the impact on the Internet. Second, unlike America Online, Prodigy won't be making it easy to reach Usenet. "Our approach is that you have to be interested and knowledgeable enough to reach these services," Day said. "The people must be communications savvy. It's not point and click." Those measures, coupled with a "strong education effort," he said, should mean that Prodigy users would know how to behave when they reached Usenet.

Prodigy is also planning to offer services that don't appear on the Internet, including an alliance with CBS to offer interactive entertainment features including show previews.

In terms of the Internet, Day said that Prodigy eventually would offer some sort of Copher-like access to information on the Internet, including government resources, sound files, and other data that might interest users. But the information would be far from comprehensive, and would be a selection of some of the more popular files. "We would act as a mediator between the Internet and our members," Day said.

"Our intention is to be very clear with our members about what the Internet is, and to be honest about the world out there—to make them aware that they're

leaving this world," Day explained. "We're thinking hard about what we've learned about content and customer service by running our own little on-line service, and that will affect how we pick content and how we present it to people."

Down the Road

The major on-line services are not rushing to provide full Internet access because doing so might well lead to their demise. After all, no matter how you access the Internet—from school, a local provider, or a commercial service—the content is the same. And as better, user-friendly Internet interfaces like Mosaic and Eudora are developed, AOL, CompuServe, and Prodigy will find it harder to differentiate themselves from the Internet.

How can the on-line services compete in this evolving landscape? First, they must keep a step ahead of the Cellos and Trumpets, and must design interfaces that any junior high school student can use. They also must develop a friendly help staff to assist users in learning to cruise in cyberspace. Users only will be willing to pay more if they're getting something extra, such as 24-hour support.

The on-line services also will have to stop charging hourly fees for Internet services. Anyone who follows more than five or six newsgroups knows that on-line time can add up, so why pay \$3–\$10 per hour when you can find a local Internet provider that charges a flat rate?

Another way on-line services could compete with the Internet would be to filter it. Users could be guaranteed an environment that's friendlier, if not as open—a homogenized, pasteurized, porn-free, flame-free Internet.

Now is not the time to place bets on which of the on-line services will prosper or survive. The landscape is changing every day, and no one can venture more than a guess as to how the market will shake out over the next few years.

Andrew Kantor (ak@mecklermedia.com) is associate editor of Internet World.

On Haiti, Shooting From the Lip The Washington Post October 6, 1994, Thu

19 of 21 DOCUMENTS

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October 6, 1994, Thursday, Final Edition

SECTION: STYLE; PAGE B7; CYBERSURFING

LENGTH: 939 words

HEADLINE: On Haiti, Shooting From the Lip

SERIES: Occasional

BODY: "

Pit Stops

For those visiting London who are in need of a quick daytime fix, "Cyberia" -- a "cyberspace cafe" -- has opened recently in central London offering coffee, cakes and connection to the Internet. **Connect charge: 1.95 British pounds** per half-hour. The address is 39 Whitfield St., W1 (near to Goodge Street underground station on Tottenham Court Road).

Jeremy Robinson

robinson@well.com

We also hear that at the Infomart in Dallas, off the Stemmons Freeway west of downtown, the newly opened High Tech Cafe has a computer maitre d' that asks diners in its machine voice, "Nonsmoking, smoking, or modem-ready?" Sure enough, not only is there a phone jack at the table, but a fax machine is ready nearby.

Found something intriguing, improbable, insane or especially useful on the Net? Tip Karen Mason Marrero (kmarrero@aol.com) or Joel Garreau (garreau@well.com).

GRAPHIC: ILLUSTRATION, MARC ROSENTHAL FOR TWP

LOAD-DATE: October 6, 1994

- Attachment H

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE NORTHERN DISTRICT OF ALABAMA
3 EASTERN DIVISION

4 RICHARD P. METTKE,

5 Plaintiff,

6 vs.

7 TOUCHNET INFORMATION SYSTEMS,
8 INC.,

9 Defendant.

10 **ORIGINAL**

11 No. 98-PT-596-E

12 THE DEPOSITION OF DANIEL J. TOUGHEY, produced,
13 sworn and examined on behalf of the Plaintiff pursuant
14 to Notice, between the hours of eight o'clock in the
15 forenoon and six o'clock in the afternoon of Tuesday,
16 June 16, 1998, at the law offices of Spencer, Fane,
17 Britt & Browne, 1400 Commerce Bank Building, 1000
18 Walnut, in the City of Kansas City, in the County of
19 Jackson and State of Missouri, before me,

20 LYDIA HURLEY, RPR
21 BOWEN MOTTER REPORTING
22 911 MAIN, SUITE 1930
23 KANSAS CITY, MISSOURI 64105

24 a Notary Public in and for Jackson County, Missouri,
25 in a certain cause now pending in the United States
District Court for the Northern District of Alabama,
Eastern Division, wherein RICHARD P. METTKE is
Plaintiff and TOUCHNET INFORMATION SYSTEMS, INC., is
Defendant.

A P P E A R A N C E S

For the Plaintiff: Tobor & Goldstein
1360 Post Oak Blvd., Ste 2300
Houston, Texas 77056-3023
By Mr. John T. Polasek

For the Defendant: Spencer, Fane, Britt & Browne
1000 Walnut, Suite 1400
Kansas City, Missouri 64106
By Mr. Richard P. Stitt

- Attachment I -



1930 Commerce Tower, 911 Main Street, Kansas City, MO 64105
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816-421-2876 913-894-8800 1-888-352-1212 816-421-2482 bowenmotters@sprintmail.com

S T I P U L A T I O N S

It is hereby stipulated and agreed by and between the parties herein that presentment to the attorneys of record of a copy of this deposition shall be considered submission to the witness for his signature within the meaning of Federal Rules of Civil Procedure; but shall in no way be considered as a waiver of the witness' signature, and is to be signed at any time before the time of trial; and if not signed by time of trial, may be used with the same force and effect as if signed.

I N D E X

WITNESS:	PAGE
DANIEL J. TOUGHEY	
Examination by Mr. Polasek	4
Examination by Mr. Stitt	83
Further Examination by Mr. Polasek	98
SIGNATURE:	107
CERTIFICATE:	108

INDEX OF EXHIBITS

NO.	DESCRIPTION	PAGE
1	Notice	5
2	Answer to Interrogatory No. 1	17
3	Network Topograph Diagram	20
4	John Murphy Affidavit	25



INDEX OF EXHIBITS (CONT'D.)

NO.	DESCRIPTION	PAGE
5	Videotape "TouchFax America"	40
6	1st brochure of product	54
7	TF700 TouchNet terminal brochure	55
8	TF700 brochure	56
9	Not identified	-
10	Ad for Telephony Magazine	57
11	TF450 brochure	58
12	Interactive World article, 10/92	59
13	Multimedia Interactive Terminal Loc. ducmt	59
14	KC Business Journal article, reprint	60
15	1992 brochure	60
16	Copy of Patent # 4359631	63
17	Info from VPR Creative Group	66
18	Invoice from Spinnaker	67
19	Invoice to Prodigy	68
20	Printout of source code/transaction log	69
21	Documents re: TON Services, Inc.	70
22	Documents re: Mediatel	74
23	Fax to D. Vermeire, 11/92	77
24	Document to D. Vermeire, 9/92	79
25	License Agreement	80

(Exhibits were retained by Mr. Polasek)



1 wide web sites they would like to go to. And I
2 believe now America On-Line has a world wide web
3 site and a dedicated interface through a dial-up
4 system, so they have two different paths, if you
5 will. And so I guess ours is the latter, we will
6 provide access to the internet and let somebody
7 decide where they want to go.

8 Q Okay. Let's back up. I was asking you questions
9 that relate to a user of the terminal being billed
10 for access to the internet through the use of a
11 commercial on-line service provider such as
12 Prodigy or AOL, CompuServe.

13 A Yeah.

14 Q And you said that TouchNet does not currently use
15 or have a terminal that does that.

16 A Correct.

17 Q But you did indicate they have plans to do so?

18 A Correct.

19 Q Okay.

20 A But not necessarily through America On-Line as a
21 internet service provider.

22 Q Okay. Then how is it that --

23 A You will go through a variety of different
24 internet service providers so just -- Earth Link,
25 for example, they provide -- let's say they



1 provide internet dial tone basically, right?

2 Q Okay.

3 A And our systems then will -- as if you are the
4 user, will ask you where you want to go.

5 Q Okay.

6 A Or highlight different destination points on the
7 world wide web.

8 Q But if I am the user --

9 A Uh-huh.

10 Q -- I am going to have to put my credit card in
11 there and pay for that access, correct?

12 A That is the plan.

13 Q Okay. And what I am trying to get at is, do we
14 have the terminal and the software set up to do
15 this? Do we expect to roll out a terminal this
16 year, next year --

17 A Yes.

18 Q -- or when?

19 A Very soon.

20 Q At the present time, TouchNet has not rolled out
21 one of those terminals though?

22 A Not that charges for the service.

23 Q Okay. When you say very soon, can you be more
24 specific?

25 A Sometime in the next 30 days. But, again, it is



1 Q That would be on that particular machine?

2 A It would be stored, yes, on that particular
3 machine.

4 Q If they went to a different machine in another
5 part of the airport or something, their card would
6 go through the same validation procedure?

7 A Correct, right, correct.

8 Q This exhibit, Exhibit 3, also references an
9 on-line interactive database. And the second
10 bullet point below that, it says, Public - Access
11 to CompuServe, Prodigy.

12 A Correct.

13 Q This goes back to our earlier discussion, but the
14 terminal that this document attempts to describe
15 does not disclose the use of the credit card to
16 pay for access to CompuServe or Prodigy, correct?

17 A This document doesn't specifically do that.

18 Q And at that time, TouchNet was not -- the terminal
19 was not set up to charge the user for access to
20 CompuServe or Prodigy; is that accurate?

21 A Well, at that time, the terminal didn't even have 1991
22 CompuServe or Prodigy on it. At that time, these
23 were -- these are ideas of what you could do
24 because, again, our main business was selling to
25 third parties our system.



1 internet pop up there. Did you notice that?

2 A No, I didn't.

3 Q Let's see if we can go back. I'm not able to get
4 it stopped there. See if I can try it again.

5 MR. STITT: Let me give it a try.

6 THE WITNESS: I think I did see that.

7 You are in front of it now.

8 (Whereupon, the videotape, Exhibit 5,
9 was rewound to counter 34.)

10 Q (By Mr. Polasek) Now that we have been able to
11 stop the tape, it shows a rectangular gold block
12 labeled internet. I think it is right at -- I
13 thought it was the 36 second mark. It may be 34.

14 MR. STITT: It appears to be 34.

15 Q (By Mr. Polasek) Did that provide for access to
16 the internet? If the user was to touch that icon,
17 I guess is what you would call it, that portion of
18 the TouchNet screen, does that enable a user to
19 gain internet access or do you know?

20 A Not at that time, no. That was like MCI mail
21 above it. Those are possible uses for the system.
22 And so the reason we built this video was to sell
23 our systems. And so, again, the vision of
24 TouchFax, TouchNet was its multipurpose
25 information communication terminal that, depending



1 other types of information databases such as USA
2 Today sport center for on-line sports information.

3 And then the last bullet is BBS, which is for
4 bulletin board service applications, any kind of
5 bulletin board, which was really, you know, a
6 predecessor in many respects, you know, to the
7 world wide web. Different types of information
8 bulletin boards that our system could access.

9 MR. STITT: I think we can go on unless
10 you have redirect.

11 FURTHER EXAMINATION

12 BY MR. POLASEK:

13 Q Yeah, I have some questions starting with what was
14 marked as Exhibit No. 3. Let me start over. With
15 regard to Exhibit 3, isn't it accurate that access
16 to Prodigy and CompuServe was not available at the
17 time that this document was prepared on the
18 TouchNet terminal?

19 A That's correct.

20 Q Okay. So at the time that this document was
21 prepared, you couldn't access Prodigy or
22 CompuServe from a TouchNet terminal?

23 A In 1991, that's correct.

24 Q And this document -- again I think we have been
25 through this -- this document itself does not



Expedited/Special Dispatch

APPN: 09/134,831 (Reissue)

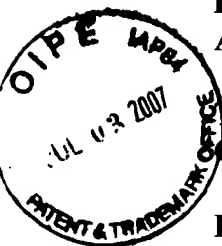
Filed: August 17, 1998

Appellant: Richard P. Mettke

Title: On-line Communications Terminal/Apparatus

Group Art Unit: 2743

Examiner: Stella Woo



**REVISED APPEAL BRIEF TO THE COMMISSIONER OF PATENTS
BASED ON NOTIFICATION OF NON-COMPLAINE WITH THE
REQUIREMENTS OF 37CFR 1.136, DATED June 25, 2007**

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited on
6/29/07 with the US Postal Service with return
Receipt requested. The envelope was addressed to:
Commissioner of Patents and Trademarks,
Mail Stop Appeal
P.O. Box 1450 Alexandria, VA 22313-1450

Commissioner of Patents and Trademarks,
Mail Stop Appeal,
P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In response to the notification of Non-Compliance with Requirements of 37 CFR, dated June 25, 2007, the applicant submits the following revised Appeal Brief to the Commissioner of Patents. The revised Appeal Brief is in accordance with Code of Federal Regulation 37, section 41.37. In a discussion with Ms. Darlene Brown (USPTO) on June 26, 2006; it was explained that as a pro se appellant (not represented by a registered practitioner), the appellant's appeal brief only need to only substantially

comply with paragraphs (c)(1)(i) through (c)(1)(iv) and (c)(1)(vii) through (c)(1)(x) of this section. It was further noted that as a pro se appellant, the only items that I needed to address were to add an Evidence Appendix and Related Proceedings Appendix. No other corrections were required. These corrections have been made

Because this is part of a reissue prosecution, this case should be special and expedited. I am appealing the examiner's rejection (35 USC 103 (a)) of the claims in my Request for Continued Examination (RCE) under 37 CFR 1.114. The RCE was filed on 27 November 2006. A Final Office action was issued on February 23, 2007. This is a reissue application of Patent **5,602,905**. I have presented a *prima facie* case for the allowance of the claims during the prosecution of the reissue application. As this reissue case has been prosecuted for almost nine years, the applicant requests that a sense of urgency be given to this appeal and it be dealt with as a special dispatch as required by reissue actions, contrary to how it has been processed in the past.

1. **Real party in interest.** I, Richard P. Mettke, appellant, am the real party in interest.
2. **Related appeals and interferences.** There are no appeals or interferences known to the appellant which would directly affect or have a bearing on the Board's decision in the pending appeal.
3. **Status of claims.**
 Claims 6 is pending
 Claim 6 was rejected by the examiner.
4. **Claim 6 is being appealed.**

5. Status of amendments. All amendments and responses to Office Actions have failed to persuade the Examiner. No amendments are pending.

Summary of invention.

The present invention disclosed herein comprises a system for accessing and interfacing the Internet using a credit card. The system includes a video display monitor coupled to a CPU; a keyboard for providing user interface coupled to the CPU; a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal or other activity; means for accessing the Internet and allowing for user interaction; software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

Users can publicly access and interface with the Internet and pay for use or activity using a credit card. The applicant has hard time not viewing that the previous BPAI decisions were not based on hindsight. The BPAI had to present the combination of ~8 pieces of prior art two different ways in rendering their decision that the applicant claims were obvious. Furthermore, there was no discussion of the state of Internet which was key here. 1994 and 1995 were key years in the development of Intranet technologies and processes. That was a crowded time frame for Internet technologies and processes. Some of these processes and technologies may seem to have been “common sense” or obvious now, but until the growth of the Internet, they were by no means obvious. What were you doing with the Internet in January 1995? Would you have paid to access or perform some action at a terminal? I will show in this brief that the BPAI (and examiner) made many errors in their decision and that this case should have never been sent to the BPAI. The BPAI erred in its interpretation of the scope and wrongly used hindsight to combine prior

art, in essence blue printing the applicants claims to obviousness. The BPAI erred in describing the level of ordinary skill in the prior art. I will show how later in this brief. There were too many differences in the ~8 pieces of prior art that the BPAI combined to render the applicants claims as obvious. The applicant will show in this brief other considerations, which serve as indicia of nonobviousness that will include, commercial success, unsolved need and failure of others. This case and its claims should have been allowed over 7 years ago.

The appellant would like to note the original Patent was applied for on January 23, 1995 and granted on February 11, 1997.

6. Issues.

I. The drawings:

The examiner objected to the drawings because the original disclosure does not support the showing of the terminal housing as depicted in Figure 2, which was submitted as part of a substitute sheet of drawing during the prosecution of the original patent for the same reasons given in the final Office action mailed March 12, 2002. Her rationale was that Figure 2, as originally filed shows a cubicle with a work area/desk top, privacy wall, chair/ stool and a terminal device generally labeled as numeral 2. There is no support in the original disclosure for the terminal housing as incorporating the monitor, keyboard, and credit card reader in the manner depicted in the current Figure 2. The examiner states that correction is required.

II. New Matter- The examiner states in the final office action mailed March 12, 2002, new matter was added as an amendment to the specification during the prosecution of

the original patent. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: col. 2, lines 3-7; col. 2, line 53 - col. 3, line 3.

III. Claim Rejections - 35 USC § 103

The examiner rejected Claim 6 under 35 U.S.C. 103(a) as being unpatentable over the article by Allen Weiner, entitled "TouchFax Provides the Ultimate in Place-Based Interactivity" (submitted as Exhibit E in the TouchNet Protest on November 4, 1998, hereinafter "Exhibit E") in view of the TouchFax brochure entitled "Vision, Power, Versatility" (submitted as Exhibit F in the TouchNet Protest on November 4, 1998, hereinafter "Exhibit F"), and further in view of an article by Rawn Shah entitled "Suggestions for Information Kiosk Systems using the World Wide Web", submitted with the Protest by North Communications, Inc. as Exhibit I (hereinafter "the Shah article") for essentially the same reasons given in the final Office action mailed March 12, 2002 and the Examiner's Answer mailed August 17, 2005, and affirmed by the BPAI Decision mailed August 31, 2006. The examiner also rejected claim 6 on the grounds of *res judicata* (see MPEP 706.03(w)).

lines 11-12).

IV Applicants argument that the Shah Abstract teaches away accessing the Internet.

The examiner states that the applicant's arguments that filed October 25, 2006 have been fully considered, but they are not persuasive. The Applicant argues that "Shah teaches away from accessing the Internet." The examiner disagreed. Her rationale; Firstly, the title of the Shah article is "Suggestions for Information Kiosk Systems

using the World Wide Web." On page 2, line 4, Shah clearly states that "the Web is part of the Internet. This allows users access to the many services on the Internet." Moreover, in the BPAI decision, which is in effect, the "law of the case" (see MPEP 706.03(w)), the Board states that "Shah teaches, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. Shah suggests that consumers wanted access to the Internet for these services.

7. Grouping of claims.

The Examiner has rejected Claim 6 as not being patentable (35 USC, 103 (a)).

8. Argument.

Issue I- the drawings; whether new matter was introduced into the drawings

The applicant respectfully submits that the same examiner accepted the resubmission of his drawings in 1996. The resubmission was based on the examiner's direction in office action dated, April 27, 1995, page 2, line 3, "Therefore, the modem, central processing unit, monitor, keyboard and printer must be shown or the features cancelled from the claims. The applicant is at a loss at how an examiner can frequently change their mind as to what is proper and what is not proper in a patent prosecution. Never the less, the applicant will work with the examiner to determine what is acceptable, when the prosecution reaches the point of reissue.

Issue II New Matter-

The items that the examiner requested be removed which is not supported by the original disclosure (col. 2, lines 3-7; col. 2, line 53 - col. 3, line 3) where deleted in an Amendment dated May 29, 2002.

Issue III-Whether claim 6 is unpatenable under 35 USC, 103 (a) over the prior

art

In addition to arguments that will be provided below, the applicant feels that the BPAI's previous decision and review of the appeal should have been held to the standards of Section 706 of the Administrative Procedures Act (APA). The BPAI should have reviewed this case on what was in the record (Four Corners of the closed record) and not be allowed to bring in references or make decisions based on expertise or experience. This would have prevented hindsight (the applicant's disclosure was in JAN 95, over 12 years ago). Hindsight is difficult to overcome in case that has been going on for such a lengthy period. By not adhering to section 706, APA, the boards previous decision lends it self to question whether there was an impartial review of the record. The BPAI states "that this case was important because of dismissed civil litigation (cases that were dismissed 1998 and 1999) and protests that were filed". Does that mean that other cases are not as important? It appears that the previous BPAI review of this case was given more scrutiny then other actions before the board. Had the procedures in the APA been followed, there would not have been any perceived irregularities or perceptions. Based on the above, the BPAI should remove from the record any mention or reference to the Internet Navigator, Aliens among Us, On Haiti, Shooting from the hip and any reference to Wikipedia. Any decisions made on this case should be made from the record. The Examiner based her response in the Final office action, dated February 23,2007 for the most part on her previous responses to office and appeal actions (not withstanding the applicant's arguments that the Shah Abstract teaches away from accessing the Intranet that is addressed below in Issue IV). The examiner pretty much summed up that the applicant's comments/arguments relating to that the patentability of Claim 6 was without

merit because of the BPAI's decision of August 31, 2006 which is in effect, the "law of the case" or *res judicata*. The applicant respectfully disagrees that he can not rebut the BPAI's decision, otherwise the August 31, 2006 decision would have been made final for judicial review. At least the applicant would hope so. Otherwise, the applicant would be wasting another twelve months or more submitting another appeal. This case has clearly taken too much time in to come up with a final resolution. If I had to keep an attorney on retainer to prosecute this case for the entire time, I'm sure it would have cost the applicant \$ ~ 3-5 million, over the almost 9 years it has taken. I'm surprised that any independent inventor can get anything patented. I intend to address my comments/arguments to both the BPAI decision of August 31, 2006 and the Final Office action of February 23, 2007 relating to the rejection of Claim 6 in the following paragraphs.

The applicant disagrees that "TOUCHFAX AMERICA, video tape recorded May 14, (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA)" render claim 6 obvious. The videotape is clearly a concept, experimental, an idea and marketing tool. The examiner rightfully excluded it in an Office Action dated August 24 1999, page 8, 3rd paragraph". Although Exhibit C, 4 shows a frame from the video tape of exhibit C advertising connection to the Internet, it was stated in the deposition Daniel J. Toughey (attachment D, pages 14-15 of RCE) that the terminal shown in the video tape did not actually enable a user to gain access or interface with the Internet.

This alone should have negated its use as prior art or use as rendering the applicants' claims as obvious. The applicant also disagrees that TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest) is prior art. In his deposition (attachment I, page 22 & 98 of RCA), Mr. Toughey states specifically that in 1991 (the time the document was distributed), the terminals did not have access to the Internet, Prodigy and CompuServe. This was a concept, experimental, an idea and marketing tool. This alone should have negated its use as prior art or use as rendering the applicants' claims as obvious. Probable utility does not establish practical utility.

The BPAI rejected claims 6-9 under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D., Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

The BPAI states that in Exhibit E it states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (page 31, line 16 of BPAI decision) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax terminals to provide public online services and public Internet access as those features became common at home and business."

The applicant does not understand how this is a "suggestion to modify" a TouchFax terminal to include Internet access and interface. The only suggestion would be if they (Touchfax) saw the applicant's disclosure and added this capability to their terminal. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access the Internet prior to the date of the applicant's

disclosure in January 25, 1995. He also goes on to state that as of the date of his deposition, **June 16, 1998**, **no** Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15, 44, original/first appeal). This is three and a half years after the applicant's disclosure on January 23, 1995. This clearly points to nonobviousness and demonstrates a lack of suggestion, teaching or motivation.

The BPAI suggests that the motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all of the exhibits are from the same corporation, TouchFax, and expressly teach modifications.

The applicant respectfully disagrees that there is motivation to combine Exhibits C, D, E, and F and that they expressly teach the modifications to add Internet access and interface on a point-of-sale basis. The BPAI does not "show" objectively how the references teach this modification other than seeing the applicant's disclosure in January 1995.

Mr. Massey's statements in his deposition, "that the BPAI quotes" stated that they (exhibits E & F) have the capability to expand or modify the terminal applications to "meet customers needs" are indefinite and probable. Of course he is going to say this when he is under going a litigation deposition. There is no corroboration of his statements. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access or interface with the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of the deposition, **June 16, 1998**, **3 ½ years after the applicants disclosure**, **no** Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15, 44). This was **three and half years** after the applicant's disclosure and clearly and unequivocally points to **nonobviousness**.

I would like to point out that there are distinct and clear difference's between Commercial On-line Services (AOL, Prodigy, CompuServe,etc) and the Internet. The BPAI has for the most part adequately defined them in their August 31, 2006 decision. I shall not repeat the descriptions here.

I will take exception to the BPAI's interpretation of access (and interface; which was not addressed in their email analysis) to the Intranet. The BPAI stated that because some of the Commercial On-line services provided email, they provided access to the Internet via e-mail. The board stated on page 47 (BPAI decision), that the claims recite access to the Internet is met by access to "one service" on the Internet, such as e-mail. The board also states that email through a Commercial On-line service provider (AOL,Prodigy, Compuserve, etc.)that uses the Internet to send email qualifies as "access to the Internet".

The applicant respectfully asks the questions; What about interface?

The applicant respectfully disagrees that accessing on-line service providers qualify as Internet access and interface. Claim 6 states "accessing the Internet ", as well as interfacing with the Internet. My claims do not say that you have to go through the method of point A (commercial on-line service) and B (send an email) and then point C email goes through the back office on-line service propriety architecture and may or may not be sent over the Internet. Clearly the claims in 6 say access and interface with the Internet. You either have access and interface or not. This an area that the applicant feels is clear a case of blue printing by the BPAI; using my disclosure to put together pieces of prior art to teach my claims.

On Haiti describes that "'Cyberia' -- a 'cyberspace cafe' --has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour."

On Haiti has 26 words in the article. There is not enough information to assess this prior art. There is not enough detail that discloses the structure, interface, and processes for this reference to be applied as prior art. Let alone suggesting, teaching or showing motivation to combine. Regardless, the BPAI has not provided any clear specific evidence to support the combination or modification as they suggest. The BPAI's unsupported methodology in using Haiti and its combination of prior art could render just about any patent obvious. Suppose it was an article about a "man sells cold soda from his store.....and 19 more words". Using the methodology above, the BPAI could determine that all vending machines and associated technologies (Refrigeration, coin acceptance machines, etc) were obvious. I could give many other examples.

The Landis & Gyr, ISDN console, Public telephone and telematic console. The examiner had reviewed; this relied upon prior art by the BPAI. In an Office Action Summary, dated August 24, 1999, the Examiner stated on page 8- 9, ".they lack certain elements in the claims, such as a printer, touch screen interface and Internet access." Hence it was not relied on prior art. The applicant agrees.

The scope of the invention Arguments

The BPAI defined the applicant's field of endeavor as a pay-per-use public communication terminal, and the particular problem with which the invention was concerned with was providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals. The BPAI also said the references

were within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access and interface or as pay-as you-use application.

The applicant respectfully disagrees that the terminals listed above (Exhibits C, D, E, F, L&G ISDN console) are within the field of endeavor (nor are they pertinent) to the matter at hand. They are not analogous art. None solve the problem of accessing the Internet or interface as the applicant's claims represent. If the terminals accessed the Internet (the problem that the applicant solves), allowed for interface on a point-of-sale basis, then they may have been pertinent and relating to the applicants field of endeavor. The BPAI use of Public Communications terminal is too broad as a field of endeavor.

Communications relates to many sub areas, facsimile machines, telephones, televisions, cellular phone and global positioning systems just to mention some of the areas. A more narrowed (and correct) field of endeavor would have been "Internet". Hence, if the proper field of art were used, it would negate the BPAI's analysis and resultant decision.

The BPAI brief states" Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet. (The last part of the underlined statement is pure speculation

inserted by the BPAI, as evidenced by Mr. Massey and Mr. Toughey statements that their terminals, more than 2 ½ years after the applicant's disclosure could not access the Internet).

It has been proven by statements in a deposition by Mr. Toughey, (Attachment I, pages 14-15,44), that the terminal in Exhibit C did not access or interface with the Internet. That the tape was a vision or concept. Also, in his deposition he stated that as of the date of the deposition (June 16, 1998), 3 ½ years after the applicants disclosure, that the referenced Touchfax terminals still did not have the capability to access and interface with the Internet as in the applicant's claims. So, how could it be a later improvement, as stated by the BPAI? Applicant fails to see how exhibit C "demonstrates" that the terminal "can" be built. Particularly when the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet, as previously mentioned in his deposition as late as June 1998. Furthermore, the applicant fails to see any objective or specific reasons provided by the BPAI as to how exhibits C, E and F show motivation to add Internet access and interface. Again, the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998 and exhibit C was a marketing tool and concept. Probable utility is not practical utility.

The BPAI brief states that "Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by

the same corporation provides **the express** suggestion to modify Exhibits E and F to provide access to online service providers.

Regardless of the BPAI interpretation of what qualifies for Internet access, the *Internet Navigator* (a reference provided by the BPAI) clearly points out that on-line service providers are not the Internet (page 57). As previously discussed, Touchfax representatives stated (in a deposition) that in 1991, the date of the publication, that they did not have access to on-line services such as Prodigy and CompuServe. This should have negated this document as any type of reference.

The BPAI stated that they approached "the obviousness issue from two directions. First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we **then show why it would have been obvious** to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer. Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the **express suggestion** to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a videotape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of

access to the Internet. Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

On Haiti discloses charging for use of a public computer terminal to access to the Internet. One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

The applicant fails to see any motivation, teaching or desirability to combine the references as shown; to teach the applicants claims. Nor does the applicant see how one skilled in the art would have been motivated by the BPAI reasoning for obviousness described above. The BPAI states that they are not relying on Exhibit C as a main reference, but ties it in with Exhibits D, E&F and On Haiti. The applicant fails to see how there can be an "express suggestion" to use Exhibit C, D, E & F in a combination to modify. As previously mentioned, Exhibit C was marketing tool and concept, not a capability. The owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition **as late as June 1998**. Also as previously mentioned, Exhibit D did not have the all the capabilities listed on it in 1991, particularly access to on-line services. Exhibit D was simply a concept or idea, a listing of capabilities that that did not exist at the time (1991). This was stated in a deposition by the owner of Touchfax (Attachment I of RCE, pages 22 & 98).

IV Applicants argument that the Shah Abstract teaches away accessing the Internet.

Just to be clear, the rejection (35 U.S.C. § 103(a)) of the applicants reissue is based on the combination Exhibits E & F (attachments C&D of RCA) and based on the teaching of Shah (Attachment B). The additional rejections by the BPAI will be addressed later in this document. Applicant will not directly address the combination of prior art discussed above since the new argument is that the Shah abstract teaches away from accessing the Internet.

A key point here is that the examiners (and BPAI) decision was based on the Shah reference teaching accessing the Internet (in combination with Exhibit E- Attachment C & Exhibit F-Attachment D). “Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract)”

The Applicant maintains and will demonstrate that the Shah teaches away from accessing the Internet. And hence should not be used as a prior art rendering the applicants application as obvious in combination with exhibits E& F. The applicant maintains that the both the Examiner and BPAI misinterpreted or misread the Shah abstract. The Shah abstract does not teach accessing the Internet. The Shah Article teaching using a **“web style browser”** on a standalone or networked (not to the Internet). It teaches away from accessing the Internet. The applicant will demonstrate this in the following analysis of the Shah Abstract. The entire article needs to be read and interpreted as a whole, not just the first few introductory paragraphs. It is clear that the Shah teaches away from accessing the Internet, and only wants to use the “Interface or web browser” popularized on the Internet in the Kiosks he describes. The irony I (from the applicants view) is that if you pull this

piece of prior art from the Examiners equation for a rejection it would be an “allowed” reissue patent and would have never went before the BPAI. .

Analysis of the Shah abstract-

Summary- The Shah abstract teaches using a World Wide Web type “interface” (or browser)(**Emphasis added**) as part of an information kiosk system. Below is a “cut-and-paste” of the Shah relied upon abstract paragraphs with an interpretation and comments.

The first paragraph calls out the systems that he is referencing are “kiosk based”

- The second paragraph talks about how the Internets World Wide Web has provided the internet with easy interface (**emphasis added**)
- The third paragraph talks about the requirements that that an information kiosk system based upon the World Wide Web must have. Hence, it talks about a Kiosk-based information system based upon the World Wide Web in the context of a type of user interface (emphasis added) to be used in another application, not accessing the Internet.
- Another key point

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

World Wide Web has provided the Internet with an easy interface superceding access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Below is a cut-and-paste of the Shah "Introduction" in the relied upon abstract.

- Again, in the introduction Shah talks about user-friendly interfaces. He means the design of the World Wide Web interface; the browser (**not accessing the Internet**).
- Another key point in understanding the abstract is Shah's reference to Kiosk-based Information systems, not Internet based or accessible. Explicit that they are not connected to the internet, nor suggest it.

Introduction

Kiosk-based Information system has many requirements to create the most-user friendly interface while maintaining security and functionality. *User friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

Below is a cut-and- paste of the next Shah abstract paragraph.

They key to understanding/interpreting this paragraph is in the first paragraph.

Shah asks the question is why one would use the World Wide Web as a **design** for a kiosk-based information system. Key points are World Wide Web as a **design** (**Emphasis added**) and for a Kiosk- based information system. **Not Internet access.**

He goes on to talk about how the web and its capabilities (reference to the Browser or interface) are a standard on the Internet.

When he is talking about the Web, he clearly is talking about the Web and it's user **interface. This paragraph has the only mention of the Internet in Shah's abstract.** And it is only in the context of the Web (Browser) and its success on the Internet, not accessing the Internet

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Below is a cut-and- paste of the next Shah abstract paragraph.

Shah talks about interest in the World Wide Web. Then he goes on to talk about the various browsers. In context, he is talking about the functionality of the browsers. **Not interfacing or accessing the Internet.** And then he goes on to talk about who may have an interest in a “kiosk based” information system (emphasis added).

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organization who wish to provide a paid service through kiosks

Below is a cut-and-paste of the next Shah abstract paragraph.

Here Shah talks about the recommended user interface of the Browser.

User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage session's counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. If this were indeed an Internet accessible system, there would be no need for servers. He talks about connecting to a network and stand-alone systems with no network interface. So, at the most what he discusses is a Local Areas Network (LAN). Emphasis added. Not accessing the Internet (Emphasis added).

The Server.

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used. Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about

servers. This is probably the most important paragraph in my claim that the Shah abstract teaches away from accessing that the Internet. Here is where he talks about the

functionality of the kiosk- based Information system that he describes. Again, he talks about servers networked (LAN) providing the information. Not the Internet. If the system had functionality with the Internet it would have been in this paragraph.

Functionality

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. Her Shah talks about storage of data and associated problems. If this were Internet based or assessable this would not be an issue. He also talks about a the problems associated with local Kiosks (not networked)

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which

is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about security. Shah talks about security of stand-alone and networked systems

Again, when networked, it's a LAN. When standing alone all information is contained on the Kiosks. There is no mention of Internet access or interface.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the serves computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIXC, VMS, etc, operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often.... (Article cuts off here. But irrelevant...)

No comments on the last paragraph.

Control

Control involves the access to the Server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied is very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific access to documents or services. The concept of registered users and billing may be built in to the server.

In summary, the Shah abstract teaches using the World Wide Web "interface design" (browser) on a stand-alone (local) or networked (LAN). Therefore, it clearly teaches away from accessing the Internet. As the Shah prior art was the main reference that examiner (and BPAI) decided was rendering the applicant application obvious (because it teaches accessing the internet), when combined with Exhibits E and F. The Shah abstract does not teach, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. The analysis provided above clearly demonstrates this fact. The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the RCE Final Office Action and appeal brief to the BPAI. The applicant has taken the liberty of providing a "marked up" version of the Shah abstract at Appendix B-2 to assist in the interpretation.

9. Remarks

The BPAI has not shown any objective or specific teaching, suggestion or motivation as to why someone skilled in the art would combine the prior art references to yield what is in the applicant's disclosure, of January 1995, even though they approached the obvious analysis from two different avenues. The applicant feels that the BPAI used the applicant's disclosure to blue print pieces of prior art to defeat patentability. This has been clearly shown in the above arguments. As demonstrated in the applicant's

arguments, the BPAI decision appears to be a discussion of the ways multiple art references can be read on the claimed invention in **January 1995**.

The BPAI has failed to show any pertinent desirability that would suggest, teach or motivate the combination of the relied on prior art that would produce the results in the applicant's claims, disclosed in **January 1995**.

The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action of the RCA and appeal brief to the BPAI, as well as the BPAI rejections of obviousness to issue an allowance.

10. Summary.

In addition to the arguments provided above, additional indicia of nonobviousness relating to this reissue action should be considered and addressed by the BPAI:

- **The applicant's claims provides an unexpected result.** The appellant's invention provides for an unexpected result. The results achieved by this invention are new (at the time of the original disclosure), unexpected, superior, unsuggested by any of the relied on prior art. Specifically, a public access terminal allowing interface and access to the Internet and allowing for use a credit card for use of the terminal or other activity.
- **The application solves a different problem.** Appellant's invention solves a different problem than the references, and such different problem is recited in the claims. *In re Wright, 6 USPQ2d 1959 (1988)* Specifically, a public access terminal allowing interface and access to the Internet and allowing for use a credit card for use of the terminal or other activity. No prior art reference implicitly or explicitly had the capabilities

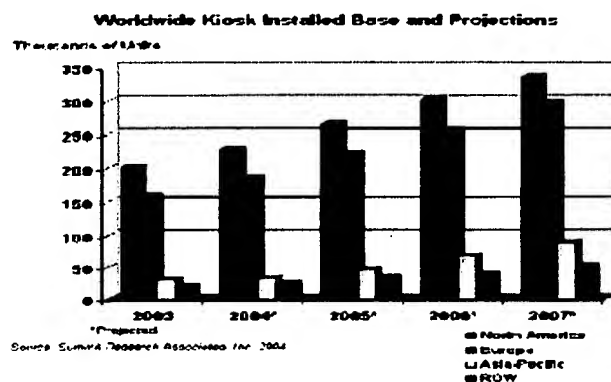
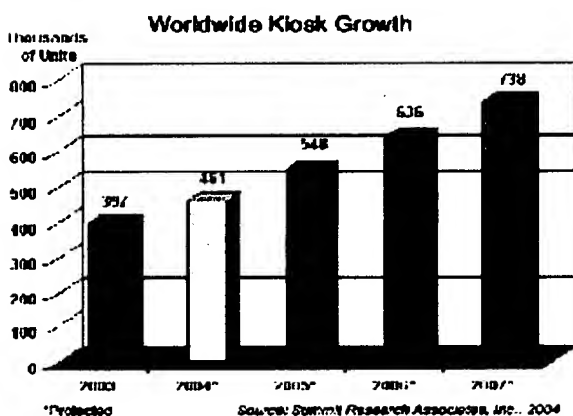
described in the appellant's claims at the time of the appellant's disclosure in January 1995. The evidence supporting this has been provided previously and in this appeal brief.

- **There has been unsuggested combination.** The prior art references do not contain any suggestion (express or implied) that they be combined, or that they be combined as the examiner and the BPAI suggests. The BPAI attempts to do this by combining ~8 pieces of prior that was not suggested and suggest that the appellant claims were obvious. I stress that possibly in the current time frame the appellant claims would be obvious or viewed as common sense, but not at the time of the appellants disclosure in January 1995.
- **Modifications are necessary.** It would be necessary to make modifications, not taught in the prior art, in order to combine the references in the manner suggested by the examiner. This has been proven by the examiners and BPAI's numerous combinations of prior art and assumptions of those skilled in the art in JAN 1995. No convincing evidence to the contrary has been provided.
- **Multiplicity of references.** The fact that ~ eight references must be combined in two different methods (eleven counting the examiner) to meet the claims invention is unequivocal evidence of nonobviousness.
- **Prior Art References.** The Patent (5,602,905) that the applicant is prosecuting for reissue is referenced as prior art in 81 issued patents. A typical patent is mentioned as prior art ~ 6-12 times in issued patents. A patent that is mentioned ~12-30 times as prior art in issued patents is usually considered a technology leading patent and has a high rating factor for commercial success. So, I guess a patent that is mentioned 81 times as prior art in issued patents is a home run technology wise and commercial wise. This definitely points to nonobviousness.

- **Failure of Others.** Prior to the applicant's January 1995 disclosure, no entity had produced a terminal that contained all of the elements of the applicant's claims.

The examiner herself stated that in an office action, dated 08/25/99 (page 4 line 5-17) that the majority of the references that the BPAI cites as obvious, were not invented prior to the applicant's disclosure. The protestors had claimed that Exhibits C, D, E, F and G demonstrated that they made public the subject of the patent. The examiner ruled that they were not invented, unequivocally prior to January 1995. This should have ruled out any of BPAI's use of these references. The BPAI did not state that the examiner erred? Is this a case of the BPAI and Examiner refusing to admit they made a mistake? During the original prosecution, the USPTO admitted that errors were made in the prosecution, and had the moral courage to admit they made mistakes and allowed the patent. s

Commercial Success. The below graphics depicts worldwide Internet Kiosk growth that was on Summit Research Consulting web site (http://www.summit-res.com/kanditreport_gs.html) in April 2005. Summit Research are considered experts in the Kiosk field. At Appendix D is an overview of an Internet Kiosk report in 2002 by Summit Research. The majority of these kiosk employ elements of the appellant's claims.



Again, the appellant would like to reiterate, ^{of 1995} ~~has~~ been presented above, the BPAI's previous decision and review of the appeal should have been held to the standards of **Section 706 of the Administrative Procedures Act (APA)**. The BPAI should have reviewed this case on what was in the record (four corners of the closed record) and not be allowed to bring in references or make decisions based on expertise or experience. This would have prevented hindsight (the applicant's disclosure was in JAN 95, over 12 years ago), which is difficult to overcome in case that has been going on for such a lengthy period. By not adhering to section 706, APA, the board's previous decision lends it self to question whether there was an impartial review of the record. The BPAI states that this case was important because of dismissed civil litigation (cases that were dismissed 1998 and 1999) and protests that were filed. It appears that the previous BPAI review of this case was given more scrutiny than other actions before the board. Had the procedures in the APA been followed, there would not have been any perceived irregularities or perceptions. Based on the above, the BPAI should remove from the record any mention or reference to the Internet Navigator, Aliens among Us, On Haiti, shooting from the hip and any reference to Wikipedia. Any decisions made on this case should be made from the record (Closed four corners).

Appellant respectfully requests that the rejections be withdrawn and allowance be provided. The appellant has made a diligent effort to amend the application so that it is in an allowable state that defines a novel structure, nonobviousness, because it produces new and unexpected results at the time of the application (**January 23, 1995**).

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Mettke', with a long horizontal line extending to the right.

Richard P. Mettke
7921 Panary Court,
Reynoldsburg, OH 43068

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FAX: 614-458-6446

Email: rmettke@aol.com

Appendices:

Appendix A- The Claims

Appendix B- Evidence Appendix

Appendix C- Related Proceedings Appendix

Appendix A-

THE CLAIMS

Claim Status:

The Claims:

Claim 6 (Amended)

A public on-line Internet terminal comprising a:

a central processing unit (CPU);

a video display monitor coupled to the CPU;

a keyboard for providing user interface coupled to the CPU;

a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal or other activity;

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

Appendix B- Evidence Appendix

THE WORLD WIDE WEB

rnw Shah
wn@rid.com
D Systems & Networking, Inc.
01 N. Campbell Ave., Ste 202B
Cotton, Arizona, 85719
602 318 0696 [US]

clean

e World Wide Web Information Kiosks Special Interest Group

April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface surpassing other access systems in its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Introduction

Kiosk-based information system has many requirements to create the most user-friendly interface while maintaining security and functionality. *User-friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the system.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

I

Appendix
B-1-1

- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such kiosks. *Advertising*

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as $t=\infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

B-1-2

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

2/3/99 1:00 PM

B-1-3

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

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- Berners-Lee, Tim, (1993). *Hypertext Transfer Protocol*, Working Internet Draft. CERN
- Cronin, Mary J. (1993). *Doing Business on the Internet: How the Electronic Highway is Transforming American Companies*, New York, NY: Van Nostrand Reinhold.
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- Shah, Rawn, (1994). *Information Kiosks and the World Wide Web*,
URL: <http://www.rtd.com/people/rawns/kiosks.html>

B-1-4

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Write-on
version

e World Wide Web Information Kiosks Special Interest Group

April 1994

bstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superseding other access systems in its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

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95 design
www design
95 on
Interface

~~EXHIBIT~~
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- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

He means the web is
an interface or browser

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Web Browser

Kiosk
based
hot internet

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

Interface - POS

No mention
of
Internet

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
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- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

hot
Internet
based

B-2-2

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

No mention of Internet

• User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webpace. → Browser
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

No mention of Internet in the User Interface

The Server

There are also suggested requirements for the Server program for these information kiosk systems.

Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

stand alone or wide area network

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Functionality

No mention of Internet

B-2-3

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

- not internet

*no
Internet*

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*standalone or remote
server*

*no
Internet*

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*local computer
network*

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B-2-4

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Handwritten: The Internet

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Next List		Bottom	View Cart	

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Final 31 Hits

Jump To

Refine Search ref/5602905

- | PAT.
NO. | Title |
|--------------|--|
| 1 7,171,686 | T <u>Operating system extension to provide security for web-based public access services</u> |
| 2 7,155,663 | T <u>Technique for implementing browser-initiated user-transparent network-distributed advertising and for interstitially displaying an advertisement, so distributed, through a web browser in response to a user click-stream</u> |
| 3 7,149,958 | T <u>Technique for implementing browser-initiated user-transparent network-distributed advertising and for interstitially displaying an advertisement, so distributed, through a web browser in response to a user click-stream</u> |
| 4 7,149,723 | T <u>System and method for determining computer access with electronic payment mechanism</u> |
| 5 7,143,337 | T <u>Apparatus and accompanying methods for network distribution and interstitial rendering of information objects to client computers</u> |
| 6 7,120,235 | T <u>Method and apparatus to provide pay-per-call performance based advertising</u> |
| 7 7,107,335 | T <u>Network access control device through fast recognition of application frames</u> |
| 8 7,089,209 | T <u>Method for revaluing a phone card</u> |
| 9 7,025,255 | T <u>Application service provider and automated transaction machine system and method</u> |
| 10 6,990,630 | T <u>TECHNIQUE FOR IMPLEMENTING BROWSER-INITIATED USER-TRANSPARENT NETWORK-DISTRIBUTED ADVERTISING AND FOR INTERSTITIALLY DISPLAYING AN ADVERTISEMENT, SO DISTRIBUTED, THROUGH A WEB BROWSER IN RESPONSE TO A USER CLICK-STREAM</u> |
| 11 6,978,252 | T <u>Method and system for transacting with network traffic</u> |
| 12 6,945,457 | T <u>Automated transaction machine</u> |
| 13 6,944,667 | T <u>Multi-media remote data access terminals and system</u> |

<http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fmeta...> 5/6/2007

B+3-1

non-exist

- 14 6,907,476 **T** Open network system and method for I/O operations with non-standard I/O devices using an extended open network protocol
- 15 6,880,123 **T** Apparatus and accompanying methods for implementing a network distribution server for use in providing interstitial web advertisements to a client computer
- 16 6,865,540 **T** Method and apparatus for providing group calls via the internet
- 17 6,850,996 **T** System and method for enabling transactions between a web server and an automated teller machine over the internet
- 18 6,847,998 **T** Apparatus for control and certification of the delivery of goods
- 19 6,807,532 **T** Method of soliciting a user to input survey data at an electronic commerce terminal
- 20 6,801,899 **T** Assistance method and apparatus
- 21 6,785,659 **T** Agent-based technique for implementing browser-initiated user-transparent interstitial web advertising in a client computer
- 22 6,763,336 **T** METHOD OF TRANSACTING AN ELECTRONIC MAIL, AN ELECTRONIC COMMERCE, AND AN ELECTRONIC BUSINESS TRANSACTION BY AN ELECTRONIC COMMERCE TERMINAL USING A WIRELESSLY NETWORKED PLURALITY OF PORTABLE DIGITAL DEVICES
- 23 6,754,641 **T** Dynamic identification interchange method for exchanging one form of identification for another
- 24 6,745,259 **T** OPEN NETWORK SYSTEM FOR I/O OPERATION INCLUDING A COMMON GATEWAY INTERFACE AND AN EXTENDED OPEN NETWORK PROTOCOL WITH NON-STANDARD I/O DEVICES UTILIZING DEVICE AND IDENTIFIER FOR OPERATION TO BE PERFORMED WITH DEVICE
- 25 6,732,178 **T** Forced network portal
- 26 6,704,403 **T** Apparatus and method for ensuring a real-time connection between users and selected service provider using voice mail
- 27 6,694,387 **T** System for enabling smart card transactions to occur over the internet and associated method
- 28 6,688,518 **T** Wall-mounted touch screen information system
- 29 6,687,737 **T** Apparatus and accompanying methods for network distribution and interstitial rendering of information objects to client computers
- 30 6,684,269 **T** System and method for enabling transactions between a web server and a smart card, telephone, or personal digital assistant over the internet
- 31 6,684,197 **T** Method for revaluing a private label card using an electronic commerce terminal
- 32 6,643,623 **T** Method of transacting an electronic mail, an electronic commerce, and an electronic business transaction by an electronic commerce terminal using a gas pump
- 33 6,636,590 **T** Apparatus and method for specifying and obtaining services through voice commands
- 34 6,629,080 **T** Transaction processing method of fulfilling an electronic commerce transaction by an electronic commerce terminal system
- 35 6,625,645 **T** Automatic static to dynamic IP address and DNS address management for remote communications network access
- 36 6,622,124 **T** Method of transacting an electronic mail, an electronic commerce, and an electronic business transaction by an electronic commerce terminal operated on a transportation vehicle
- 37 6,615,183 **T** Method of warehousing user data entered at an electronic commerce terminal
- 38 6,611,810 **T** Store display window connected to an electronic commerce terminal

B-3-2

- 39 6,609,103 **T** Electronic commerce terminal for facilitating incentive-based purchasing on transportation vehicles
- 40 6,609,102 **T** Universal interactive advertizing and payment system for public access electronic commerce and business related products and services
- 41 6,606,605 **T** Method to obtain customer specific data for public access electronic commerce services
- 42 6,606,602 **T** Vending machine control system having access to the internet for the purposes of transacting e-mail, e-commerce, and e-business, and for conducting vending transactions
- 43 6,604,087 **T** Vending access to the internet, business application software, e-commerce, and e-business in a hotel room
- 44 6,604,086 **T** Electronic commerce terminal connected to a vending machine operable as a telephone
- 45 6,604,085 **T** Universal interactive advertising and payment system network for public access electronic commerce and business related products and services
- 46 6,601,040 **T** Electronic commerce terminal for wirelessly communicating to a plurality of communication devices
- 47 6,601,039 **T** Gas pump control system having access to the internet for the purposes of transacting e-mail, e-commerce, and e-business, and for conducting vending transactions
- 48 6,601,038 **T** Delivery of goods and services resultant from an electronic commerce transaction by way of a pack and ship type company
- 49 6,601,037 **T** System and method of processing credit card, e-commerce, and e-business transactions without the merchant incurring transaction processing fees or charges worldwide
- 50 6,549,889 **T** Assistance method and apparatus
-

Next List	Top	View Cart		
Home	Quick	Advanced	Pat Num	Help

B-3-3



Table of Contents

REPORT
INTRODUCTION and EXECUTIVE SUMMARY
 Riding the Internet Costtails
 Installed Base
 Revenue Projections
 Market Sectors

INDUSTRY ACTIVITIES
 Public Sector
 Public Transportation
 Self-Checkout Devices
 Web Payphones
 Financial Services
 Retail

SURVEY RESULTS
 Number of Kiosks Installed
 Hours of Heaviest Kiosk Use:
 All Kiosks
 Number of Users per Day:
 All Kiosks
 Number of Users per Day:
 North America
 Number of Users per Day:
 Europe
 Number of Users per Day:
 Pacific Rim
 Number of Users per Day:
 Rest of the World
 Average Time Spent at the Kiosk
 Cost per Kiosk
 Cost per Unit-North America
 Cost per Unit-Europe
 Cost per Unit-Pacific Rim
 Cost per Unit-ROW
 Peripherals Used in Kiosks
 Kiosk Pointing Devices
 Kiosk Payment Acceptors
 Online Language Populations
 Internet Access Devices:
 Per Minute Charges
 Free Sites
 Usage Patterns
 Remote Monitoring Software
 Service Providers
 Consumables Providers

our reports

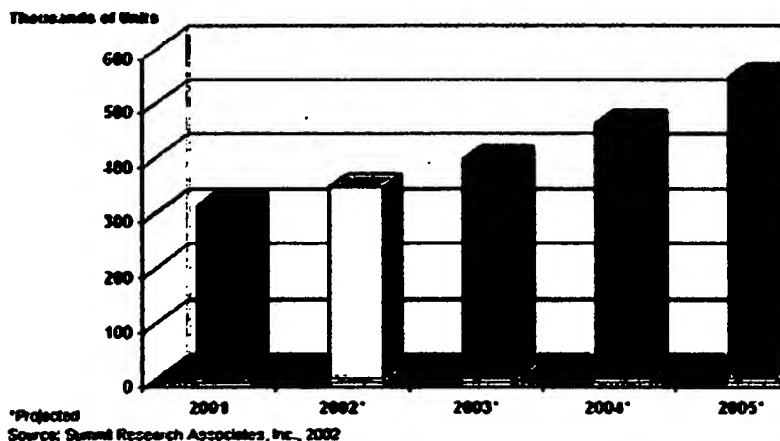
Kiosks and Internet Technology

Totally re-written in 2002, this report is the most comprehensive ever produced on the kiosk industry. Based upon an unprecedented response to an extensive survey and follow-up research, it provides Internet kiosk installed base and revenue projections from the present time through 2005. The nearly 500-page report includes 35 charts and tables, examines current trends on the leading kiosk issues of the day and offers many additional looks at the future of this fast-growing industry.

The report defines Internet Kiosks as traditional kiosks whose data is Web-based and whose customers use a proprietary or commercially available easy to use "browser wrapper" to access that information. The report no longer separates public Internet access devices, also known as Web Payphones, into a unique category. These are public terminals where users pay for each minute of connect time to conduct a wide variety of activities, including general Web surfing, e-mail, and e-commerce. In increasingly rare cases, advertisers absorb online costs, thereby offering free access.

The report provides detailed information on 225 companies in the Internet kiosk industry, discussing the market segments they are targeting (including key customers), their featured applications, the key design and development issues they face, what sets them apart from the competition and other valuable statistics of interest to kiosk, financial and telecommunication professionals. The following chart illustrates the current and projected growth for the industry. While it reflects a slow and steady improvement, it also shows the reality of the past year when many kiosk projects were on hold until the economy begins to recover. Summit believes that 2002 will be a year of re-grouping; the upswing of activity will not begin in earnest until 2003.

Worldwide Internet Kiosk Growth



The report features company profiles of 225 companies in the Internet kiosk industry, representing 38 countries around the world. Countries included:

Appendix E
 B-4-1

22. Peripherals Used in Kiosks
23. Kiosk Pointing Devices
24. Kiosk Payment Acceptors
25. Online Language Populations
26. Internet Access Devices- Per Minute Charges
27. Access to Free Sites
28. Usage Patterns
29. Remote Monitoring
30. Service Providers
31. Providers of Consumables Replenishment
32. Leading Development Issues
33. Leading Design Issues
34. Special Capabilities
35. Future Plans

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B-4-2

Leading Development Issues
Leading Design Issues
Special Capabilities
Future Plans

COMPANY PROFILES

More than 220 companies are profiled.

APPENDIX A Kiosk Questionnaire

APPENDIX B Commercially Available

Browser Front-Ends

APPENDIX C ADA Resources

Table of Figures

1. Internet Kiosk Current and Projected Installed Base
2. Internet Kiosk Installed Base, 2001
3. Internet Kiosk Installed Base, 2001-2005
4. Internet Kiosk Installed Base, Percentage Growth 2002-2005
5. Internet Kiosks, Current and Projected Revenues
6. Worldwide Internet Kiosk CAGR, 2001-2005
7. Worldwide Internet Kiosk Market Breakdown
8. 2001 Worldwide Kiosk Industry Market Sectors
9. Number of Kiosks
10. Hours of Heaviest Kiosk Use
11. Average Number of Users per Day
12. Average Number of Users per Day - North America
13. Average Number of Users per Day - Europe
14. Average Number of Users per Day - Pacific Rim
15. Average Number of Users per Day - Rest of the World
16. Average Time Spent at the Kiosk
17. Overall Cost per Kiosk
18. Cost per Unit - North America
19. Cost per Unit - Europe
20. Cost per Unit - Pacific Rim
21. Cost per Unit - ROW

are:

Argentina
Australia
Austria
Belgium
Brazil
Canada
Chile
Denmark
Finland
France
Germany
Greece
Hong Kong
Iceland
India
Ireland
Israel
Italy
Korea

Luxembourg
Mexico
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Switzerland
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The Netherlands
Turkey
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United States

Some of the 225 companies profiled in the report include:

Abuzz Technologies
Apunix
Arral Industries
Avanzit Tecnologia
BluePoint Technologies
CaliEye9
Connecto
Cyberdeck
Cybertotems
Data Asia Technology
Datatrax Multimedia Systems
ELO Touchsystems
Epoint Ltd
Frank Mayer & Associates
Friendlyway
High Technology Solutions
Horizon USA
IBM
Jentro AG
Kioscosnet
Kiosk Information Systems
Korea Data Network
Kudos Development Group
Marconi Interactive Systems
MontegoNet
Myriad Communications Ltd.

Nanonation
NCR
NeoProducts
Netkey
NetNearU
NetShift
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PFLS
PIX Corp.
Pixel Magic Imaging
PowerPhone Network
St. Clair Interactive
SeePoint Technology
Sriren Multitech, Ltd.
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B-4-3



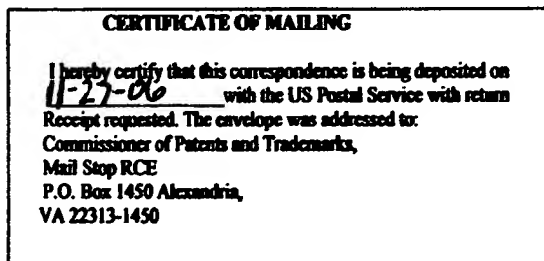
APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

Title: On-line Communications Terminal/Apparatus
Group Art Unit: 2743

Examiner: Stella Woo

**CORRECTED CLAIMS AMENDMENT TO RCE SUBMITTED ON OCTOBER
25, 2006**



Commissioner of Patents and Trademarks,
Mail Stop RCE
P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In response to the notification of Non-Compliant Amendment (37 CFR 1.121) the applicant submits the following corrected Claims Amendment. Because box 4 was checked on PTOL-324, only the corrected Claims Amendment is being provided. No fees are due since the applicant submitted the required fees with the Request for Continued Examination on October 25, 2006

Sincerely,

B-5-1

APPN: 09/134,831 (Reissue)

Filed: August 17, 1998

Appellant: Richard P. Mettke



Richard P. Mettke

7921 Panary Court,
Reynoldsburg, OH 43068

Voice: 614-861-1847

FAX: 614-458-6446 Email: rmettke@aol.com

D-5-2



APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

**CORRECTED CLAIMS AMENDMENT TO RCE SUBMITTED ON OCTOBER
25, 2006- 09/134,831 (Reissue)**

Current Status of amendments. The present claims are based on an amendment filed April 17, 2000 in response to the non-final Office action mailed August 25, 1999 and an amendment filed on December 11, 2001.

Present Claims:

6. A public on-line, pay-as-you-use communications terminal comprising a housing, wherein the housing contains:
- a central processing unit (CPU);
 - a telephone access node;
 - an internal modem coupled to the CPU and telephone access node;
 - a video display monitor coupled to the CPU;
 - a keyboard for providing user interface coupled to the CPU;
 - a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;
 - means for accessing the Internet and allow for user interaction;
 - software installed into the CPU to allow interface with the Internet and credit card service centers; and
 - a printer coupled to the CPU.
7. The terminal of claim 6, wherein the means for accessing includes a touch screen interface attached to the monitor and further includes a touch screen means for accepting input information from the touch screen interface and modifying program execution accordingly terminal which communicates and controls a microprocessor.

B-5-3

8. The terminal in accordance with claim 6 also including, within said housing, program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. The terminal of claim, wherein the housing includes further including a durable enclosure for the CPU, monitor, internal modem and printer, and a secured access door for service and repair.

RCE Amended claims

Cancel Claims 7-9

Amend claim 6 as follows:

6. (Currently amended) A public on-line, ~~pay-as-you-use communications~~ Internet terminal comprising ~~a housing, wherein the housing contains:~~

a central processing unit (CPU);

~~a telephone access node;~~

~~an internal modem coupled to the CPU and telephone access node;~~

a video display monitor coupled to the CPU;

a keyboard for providing user interface coupled to the CPU;

a credit card reader swipe device coupled to the CPU for accepting payment by a user ~~for use of the terminal;~~

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and a printer coupled to the CPU.

7. (Cancel) The terminal of claim 6, wherein the means for accessing includes a touch screen interface attached to the monitor and further includes a touch screen means for accepting input information from the touch screen interface and modifying program execution accordingly

B-5-4

terminal which communicates and controls a microprocessor.

8. (Cancel) The terminal in accordance with claim 6 also including, within said housing, program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. (Cancel) The terminal of claim, wherein the housing includes further including a durable enclosure for the CPU, monitor, internal modem and printer, and a secured access door for service and repair.

B-5-5



Expedited Procedure

APPN: 09/134,831 (Reissue)
Filed: August 17, 1998
Appellant: Richard P. Mettke

Title: On-line Communications Terminal/Apparatus
Group Art Unit: 2743

Examiner: Stella Woo

Request for Continued Examination

<p align="center">CERTIFICATE OF MAILING</p> <p>I hereby certify that this correspondence is being deposited on <u>10/25/06</u> with the US Postal Service with return Receipt requested. The envelope was addressed to:</p> <p align="center">Commissioner of Patents and Trademarks, Mail Stop RCE P.O. Box 1450 Alexandria, VA 22313-1450</p>

Commissioner of Patents and Trademarks,
Mail Stop RCE
P.O. Box 1450 Alexandria, VA 22313-1450

Dear Commissioner of Patents and Trademarks,

In accordance with Code of Federal Regulation 37, section 1.114 and the Code of Federal Regulation 37, 41.50, I am filing a Request for Continued Examination (RCE). As a small entity, enclosed is a payment in the amount of \$395.00 as prescribed in the USPTO fee schedule as required for this action. This RCE is being filed within the prescribed two month time period requirement set forth under 37 CFR 1.1.36 (a) (1) (iv) 2004, which would be no later then October 31, 2006.

B-6-1

Reference is made to the Board of Patent Appeals and Interference (BPAI) ruling affirming the patent examiner rejections (BPAI appeal No 2006-0625, date August 31) of 35 U.S.C. § 103(a), as well as the BPAI finding additional items for rejection of obvious under 35 U.S.C. § 103(a). New and additional arguments for patentability are provided below. Because this is a reissue and reexamination action, it should be considered a special and expedited procedure.

I. Claims Amendment

Please amend my claims as follows:

Cancel Claims 7, 8 and 9

Amend Claim 6 as follows:

6. (Amended) A public on-line, pay-as-you-use Internet terminal comprising a:

a central processing unit (CPU);

a video display monitor coupled to the CPU;

a keyboard for providing user interface coupled to the CPU;

a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers;

and a printer coupled to the CPU.

II. Summary of the BPAI Ruling:

The rejection of claims 6-9 under 35 U.S.C. § 103(a) by the Examiner were sustained by the BPAI. The rejections were affirmed in essence, because it was determined by the

BPAI that the applicant provided no reason why one skilled in the art would not have been motivated to combine the prior art references provide Internet access. The examiner (and BPAI) determined that one of ordinary skill in the art would have been motivated to provide Internet access as an additional pay-for-use service in the public kiosks of Exhibit E (attachment C) and F (attachment D) based on the teachings of Shah (exhibit D- Attachment A). Shah was relied upon for its teaching of Internet access via a kiosk. In addition the BPAI found additional New grounds of rejection have been entered as to claim 9 under 35 U.S.C. § 112, fourth paragraph, and as to claims 6-9 under 35 U.S.C. § 103(a). The applicant's arguments concerning the BPAI rejections are discussed in section IV.

III New Arguments based on the Examiners final rejection and BPAI appeal decision

Just to be clear, the rejection (35 U.S.C. § 103(a)) of the applicants reissue is based on the combination Exhibits E & F (attachments C&D) and based on the teaching of Shah (Attachment A). The additional rejections by the BPAI will be addressed later in this document. Applicant will not directly address the combination of prior art discussed above since the new argument is that the Shah abstract teaches away from accessing the Internet.

A key point here is that the examiners (and BPAI) decision was based on the Shah reference teaching accessing the Internet (in combination with Exhibit E- Attachment C & Exhibit F-Attachment D). "Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract)"

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B-6-3

The Applicant maintains and will demonstrate that the Shah teaches away from accessing the Internet. And hence should not be used as a prior art rendering the applicants application as obvious in combination with exhibits E& F. The applicant maintains that the both the Examiner and BPAI misinterpreted or misread the Shah abstract. The Shah abstract does not teach accessing the Internet. It teaches away from accessing the Internet. The applicant will demonstrate this in the following analysis of the Shah Abstract.

Analysis of the Shah abstract-

Summary- The Shah abstract teaches using a World Wide Web type "interface" (or browser)(**Emphasis added**) as part of an information kiosk system. Below is a "cut-and-paste" of the Shah relied upon abstract paragraphs with an interpretation and comments.

The first paragraph calls out the systems that he is referencing are "kiosk based"

- ° The second paragraph talks about how the Internets World Wide Web has provided the internet with easy interface (**emphasis added**)
- ° The third paragraph talks about the requirements that that an information kiosk system based upon the World Wide Web must have. Hence, it talks about a Kiosk-based information system based upon the World Wide Web in the context of a type of user interface (**emphasis added**) to be used in another application, not accessing the Internet.
- ° Another key point

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

World Wide Web has provided the Internet with an easy interface superceding access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Below is a cut-and-paste of the Shah "Introduction" in the relied upon abstract.

- Again, in the introduction Shah talks about user-friendly interfaces. He means the design of the World Wide Web interface; the browser (not accessing the Internet).
- Another key point in understanding the abstract is Shah's reference to Kiosk-based Information systems, not Internet based or accessible. Explicit that they are not connected to the internet, nor suggest it.

Introduction

Kiosk-based Information system has many requirements to create the most-user friendly interface while maintaining security and functionality. *User friendliness* is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

Below is a cut-and- paste of the next Shah abstract paragraph.

They key to understanding/interpreting this paragraph is in the first paragraph.

Shah asks the question is why one would use the World Wide Web as a design for a

kiosk-based information system. Key points are World Wide Web as a design

(emphasis added) and for a Kiosk- based information system. Not Internet access.

He goes on to talk about how the web and its capabilities (reference to the Browser or interface) are a standard on the Internet.

When he is talking about the Web, he clearly is talking about the Web and it's user

B-6-5

interface. This paragraph has the only mention of the Internet in Shah's abstract. And it is only in the context of the Web (Browser) and its success on the Internet, not accessing the Internet

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

Below is a cut-and- paste of the next Shah abstract paragraph.

Shah talks about interest in the World Wide Web. Then he goes on to talk about the various browsers. In context, he is talking about the functionality of the browsers. Not interfacing or accessing the Internet. And then he goes on to talk about who may have an interest in a "kiosk based" information system (emphasis added).

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example hotels, amusement parks, shopping malls, etc.

B-6-6

- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organization who wish to provide a paid service through kiosks

Below is a cut-and-paste of the next Shah abstract paragraph.

Here Shah talks about the recommended user interface of the Browser.

User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage session's counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. If this were indeed an Internet accessible system, there would be no need for servers. He talks about connecting to a network and stand-alone systems with no network interface. So, at the most what he discusses is a Local Areas Network (LAN). Emphasis added. Not accessing the Internet (Emphasis added).

The Server.

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

B-6-7

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used. Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about

servers. This is probably the most important paragraph in my claim that the Shah abstract teaches away from accessing that the Internet. Here is where he talks about the functionality of the kiosk- based Information system that he describes. Again, he talks about servers networked (LAN) providing the information. Not the Internet. If the system had functionality with the Internet it would have been in this paragraph.

Functionality

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Below is a cut-and- paste of the next Shah abstract paragraph. Her Shah talks about servers. Her Shah talks about storage of data and associated problems. If this were Internet based or assessable this would not be an issue. He also talks about a the problems associated with local Kiosks (not networked)

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual

computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently *not* a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Below is a cut-and- paste of the next Shah abstract paragraph. Here Shah talks about security. Shah talks about security of stand-alone and networked systems

Again, when networked, it's a LAN. When standing alone all information is contained on the Kiosks. No mention of Internet access or interface.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIXC, VMS, etc, operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often.... (Article cuts off here. But irrelevant...)

No comments on the last paragraph.

Control

Control involves the access to the Server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied is very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific access to documents or services. The concept of registered users and billing may be built in to the server.

In summary, the Shah abstract teaches using the World Wide Web "interface design"(browser) on a stand-alone (local) or networked (LAN). Therefore, it clearly teaches away from accessing the Internet. As the Shah prior art was the main reference that examiner (and BPAI) decided was rendering the applicant application obvious (because it teaches accessing the internet), when combined with Exhibits E and F. The Shah abstract does not teach, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. The analysis provided above clearly demonstrates this fact. The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action and appeal brief to the BPAI. Because of the amended claims, the applicant does not discuss the rejections directed towards the other claims.

IV Arguments based on the BPAI rejections

The BPAI found additional grounds for rejection. Claims 6-9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

The BPAI also concluded that the following references were prior art:

B-6-9

- TOUCHFAX AMERICA, video tape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex in Atlanta, Georgia, 1993 TouchFax Information Services, Inc., (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA).
- Deposition of Daniel Toughy in Mettke v. TouchNet, No. CV-98-PT-596-E, pp. 40-53, discussing Exhibit 5 to deposition, Pages 40-53
- TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).
- Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).
- VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).
- Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA) (hereinafter "L&G ISDN console").
- Paul Gilster, The Internet Navigator (2d ed. John Wiley & Sons, Inc. 1994⁶), pp. 15-18, 24, 25, 56, 57, 195, 221-225 (hereinafter "Internet Navigator").
- Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. cover, index (2 pages), 82-84 (hereinafter "Aliens").
- On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis (hereinafter "On Haiti").

B-6-10

Prior Art Discussion:

The applicant disagrees that "TOUCHFAX AMERICA, video tape recorded May 14, (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA)" is prior art. The video tape is clearly a concept, experimental, an idea and marketing tool. Not permitted in prior art. The examiner rightfully excluded it in an Office Action dated August 24 1999, page 8, 3rd paragraph". Although Exhibit C, 4 shows a frame from the video tape of exhibit C advertising connection to the Internet, it was stated in the deposition Daniel J. Toughey (attachment, pages 14-15) that the terminal shown in the video tape did not actually enable a user to gain access or interface with the Internet. This alone should have negated its use as prior art. The applicant also disagrees that TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest) is prior art. In his deposition (attachment I, page 22 & 98), Mr. Toughey states specifically that in 1991 (the time the document was distributed), the terminals did not have access to the Internet, Prodigy and CompuServe. Again, a concept, experimental, an idea and marketing tool. Not permitted in prior art. This alone should have negated its use as prior art. Probable utility does not establish practical utility. Because the applicant has amended the claims, he will only address those rejections that are related to the amended claim 6.

The BPAI rejected claims 6-9 under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti.

B-6-11

The BPAI states that in Exhibit E it states that "The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (page 31, line 16 of BPAI decision) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax terminals to provide public online services and public Internet access as those features became common at home and business."

The applicant does not understand how this is a "suggestion to modify" a TouchFax terminal to include Internet access and interface. The only suggestion would be if they (Touchfax) saw the applicant's disclosure and added this capability to their terminal. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of his deposition, June 16, 1998 , no Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15, 44). This is three and a half years after the applicant's disclosure on January 23, 1995. This clearly points to nonobvious and demonstrates a lack of suggestion, teaching or motivation.

The BPAI suggests that the motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all of the exhibits are from the same corporation, TouchFax, and expressly teach modifications.

The applicant respectfully disagrees that there is motivation to combine Exhibits C, D, E, and F and that they expressly teach the modifications to add Internet access and interface on a point-of-sale basis. The BPAI does not "show" objectively how the references teach this modification other than seeing the applicant's disclosure in January 1995.

Mr. Massey's statements that they (exhibits E & F) have the capability to expand or modify the terminal applications to "meet customers needs" are indefinite and probable.

Of course he is going to say this when he is under going a litigation deposition. There is no corroboration of his statements. In fact, Mr. Toughey's, states in his deposition that the Touchfax terminals and exhibits above did not have the capability to access or interface with the Internet prior to the date of the applicant's disclosure in January 25, 1995. He also goes on to state that as of the date of the deposition, June 16, 1998, no Touchfax terminals had the capability access and interface with the Internet (Attachment I, pages 14-15,44). This was three and half years after the applicant's disclosure and clearly points to unobviousness.

I would like to point out that there are distinct and clear difference's between Commercial On-line Services (AOL, Prodigy, CompuServe,etc) and the Internet. The BPAI has for the most part adequately defined them. I shall not repeat the descriptions here.

I will take exception to their interpretation of access (and interface; which was not addressed in the email analysis) to the Intranet. The BPAI stated that because some of the Commercial On-line services provided the email provided access to the Internet via e-mail. The board stated on page 47 (BPAI decision), that the claims recite access to the Internet are met by access to one service on the Internet, such as e-mail. The board also states that email through a Commercial On-line service provider that uses the Internet to send qualifies as "access to the Internet". What about interface?

The applicant respectfully disagrees that accessing on-line service providers qualify as Internet access and interface. Claim 6 states "accessing the Internet " as well as

interfacing with the Intranet. My claims do not say that you have to go through the method of point A (commercial on-line service) and B (send an email) and then point C email goes through the back office on-line service propriety architecture and may or may not be sent over the Internet. Clearly the claims in 6 say access and interface with the Internet. You either have access and interface or not. This an area that the applicant feels is clear a case of blue printing by the BPAI; using my disclosure to put together pieces of prior art to teach my claims.

On Haiti describes that "'Cyberia' -- a 'cyberspace cafe' --has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour."

On Haiti has 26 words in the article. There is not enough information to assess this prior art. There is not enough detail that discloses the structure, interface, and processes for this reference to be applied as prior art. Let alone suggesting, teaching or showing motivation to combine. Regardless, the BPAI has not provided any clear specific evidence to support the combination or modification as they suggest.

The Landis & Gyr, ISDN console, Public telephone and telematic console. The examiner had reviewed; this relied upon prior art by the BPAI. In an Office Action Summary, dated August 24, 1999, the Examiner stated on page 8- 9, ".they lack certain elements in the claims, such as a printer, touch screen interface and Internet access." Hence it was not relied on prior art. The applicant agrees.

The scope of the invention Arguments

The BPAI defined the applicant's field of endeavor as a pay-per-use public communication terminal, and the particular problem with which the invention was concerned with was

B-6-14

providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals. The BPAI also said the references were within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access and interface or as pay-as you-use application.

The applicant respectfully disagrees that the terminals listed above (Exhibits C, D, E, F, L&G ISDN console) are within the field of endeavor (nor are they pertinent) to the matter at hand. They are not analogous art. None solve the problem of accessing the Internet or interface as the applicant's claims represent. If the terminals accessed the Internet (the problem that the applicant solves), allowed for interface on a point-of-sale basis, then they may have been pertinent and relating to the applicants field of endeavor. The BPAI use of Public Communications terminal is too broad as a field of endeavor. Communications relates to many sub areas, facsimile machines, telephones, televisions, cellular phone and global positioning systems just to mention some of the areas.

The BPAI brief states "Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet.

B-26-15

It has been proven by statements in a deposition by Mr. Toughey, (Attachment I, pages 14-15,44), that the terminal in Exhibit C did not access or interface with the Internet. That the tape was a vision or concept. Also, in his deposition he stated that as of the date of the deposition (June 16, 1998), 3 ½ years after the applicants disclosure, that the referenced Touchfax terminals still did not have the capability to access and interface with the Internet as in the applicant's claims. So, how could it be a later improvement as stated by the BPAI? Applicant fails to see how exhibit C "demonstrates" that the terminal "can" be built. Particularly when the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet, as previously mentioned in his deposition as late as June 1998. Furthermore, the applicant fails to see any objective or specific reasons provided by the BPAI as to how exhibits C, E and F show motivation to add Internet access and interface. Again, the owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998 and exhibit C was a marketing tool and concept. Probable utility is not practical utility.

The BPAI brief states that" Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the **express** suggestion to modify Exhibits E and F to provide access to online service providers.

Regardless of the BPAI interpretation of what qualifies for Internet access, the *Internet Navigator* clearly points out, on-line service providers are not the Internet (page 57). As previously discussed, Touchfax representatives stated (in a deposition) that in 1991, the

B-6-16

date of the publication, that they did not have access to on-line services such as Prodigy and CompuServe. This should have negated this document as any type of reference. The BPAI stated that they approached "the obviousness issue from two directions. First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we then show why it would have been obvious to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer. Exhibit C expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a videotape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet. Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

B-6-17

On Haiti discloses charging for use of a public computer terminal to access to the Internet.

One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

The applicant fails to see any motivation, teaching or desirability to combine the references as shown; to teach the applicants claims. Nor does the applicant see how one skilled in the art would have been motivated by the BPAI reasoning for obviousness described above. The BPAI states that they are not relying on Exhibit C as a main reference, but ties it in with Exhibits D, E&F and On Haiti. The applicant fails to see how there can be an "express suggestion" to use Exhibit C, D, E & F in a combination to modify. As previously mentioned, Exhibit C was marketing tool and concept, not a capability. The owner of Touchfax stated that they did not have terminals capable of accessing and interfacing with the Internet as previously mentioned in his deposition as late as June 1998. Also as previously mentioned, Exhibit D did not have the all the capabilities listed on it in 1991, particularly access to on-line services. Exhibit D was simply a concept or idea, a listing of capabilities that that did not exist at the time (1991). This was stated in a deposition by the owner of Touchfax ((Attchmnet I, pages 22&98).

V. Remarks

The BPAI has not shown any objective or specific teaching, suggestion or motivation as to why someone skilled in the art would combine the prior art references to yield what is in the applicant's disclosure, of January 1995, even though they approached the obvious analysis from two different avenues. The applicant clear shows why in this RCE. The applicant feels that the BPAI used the applicant's disclosure to blue print pieces of prior

B-618

art to defeat patentability. This has been clearly shown in the above arguments. As demonstrated in the applicant's arguments, the BPAI decision appears to be a discussion of the ways multiple art references can be read on the claimed invention in January 1995.

The BPAI has failed to show any pertinent desirability that would suggest, teach or motivate the combination of the relied on prior art that would produce the results in the applicant's claims, disclosed in January 1995.

The applicant feels that he has provided a clear and convincing argument to overcome the examiners rejection in the Final Office Action and appeal brief to the BPAI, as well as the BPAI rejections of obviousness to issue an allowance.

Sincerely,



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ATTACHMENTS:

B-619

Attachment A- Rawn Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.)

Attachment B- Black and white copies of Exhibits C,1 to C, 6, which are copies of frames from TOUCHFAX AMERICA, video tape recorded May 14, 1993. TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).

Attachment C- Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).

Attachment D- VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).

Attachment E- TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).

Attachment F- Paul Gilster, The Internet Navigator (2d ed., John Wiley & Sons, Inc. 1994), pp. 15-18, 24, 25, 56, 57, 195, 221-225.

Attachment G- Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. 82-84.

Attachment H -On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis.

Attachment I- Deposition of Daniel Toughy in Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed June 16, 1998), Pages 1-3,14-15, 22,44 & 98

Suggestions for Information Kiosk Systems using the World Wide Web

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The World Wide Web Information Kiosks Special Interest Group

30 April 1994

Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superceding other access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

Introduction

A Kiosk-based Information system has many requirements to create the most user-friendly interface while maintaining security and functionality. User-friendliness is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

I
Attachment A-

B-6-21

- a multimedia tool is the primary type of program used by information systems because of the combination of text, graphics and sound are more appealing. The many different Web browsers have these capabilities already.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

"Web Design"

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such kiosks.

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible, or present a failed message if the time to access the document is longer than a certain amount considered as $t=\infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

B-6-22

The following are suggested requirements for an access interface based upon the above suggestions:

• Physical Requirements

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

• User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webspace.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

The Server

There are also suggested requirements for the Server program for these information kiosk systems.

Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintainence. This may be expensive if network connect time charges are expensive.

Functionality

B-6-23

Functionality of the server is key to its success. The more special functions it serves and the greater the extensibility of the server program, the better its chances of success as a popular system.

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently not a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

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Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

B-6-24

contain restricted documents but data managers may wish to restrict certain areas of their Webspace dependent upon their own criteria.

Control

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

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B-6-25

PLAY TOUCHFA:0:00:08
Information Systems, Inc.
TOUCHFAX AMERICA

IRI: 1:20
WITH MUSIC

Audio: Mono

Recorded: 5-14-93

VPR Creative G:00:01:4

EXHIBIT

C, I

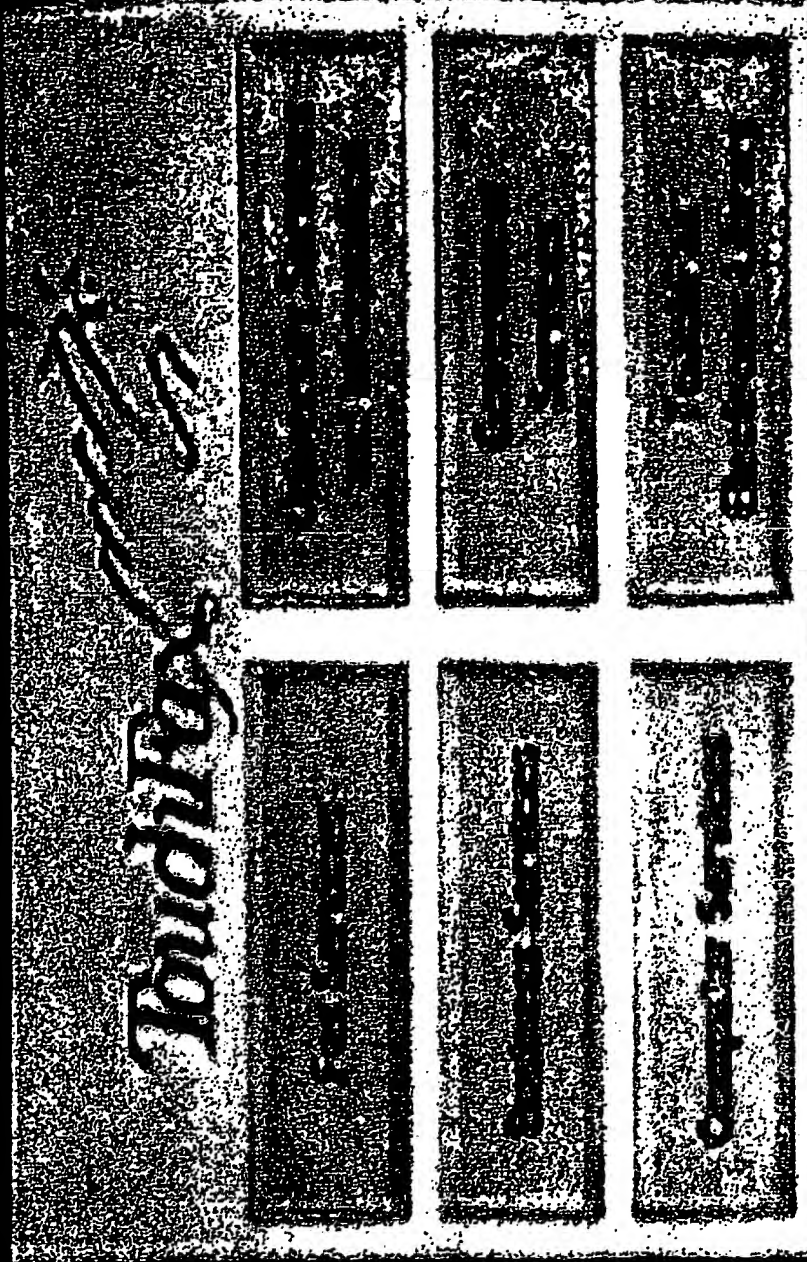
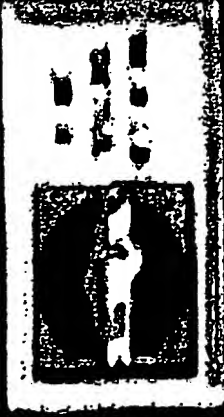


EXHIBIT
C, 2

B-6-27

Touch For
NEO

1 Man 2 Men



0100:25:15

EXHIBIT
C, 3

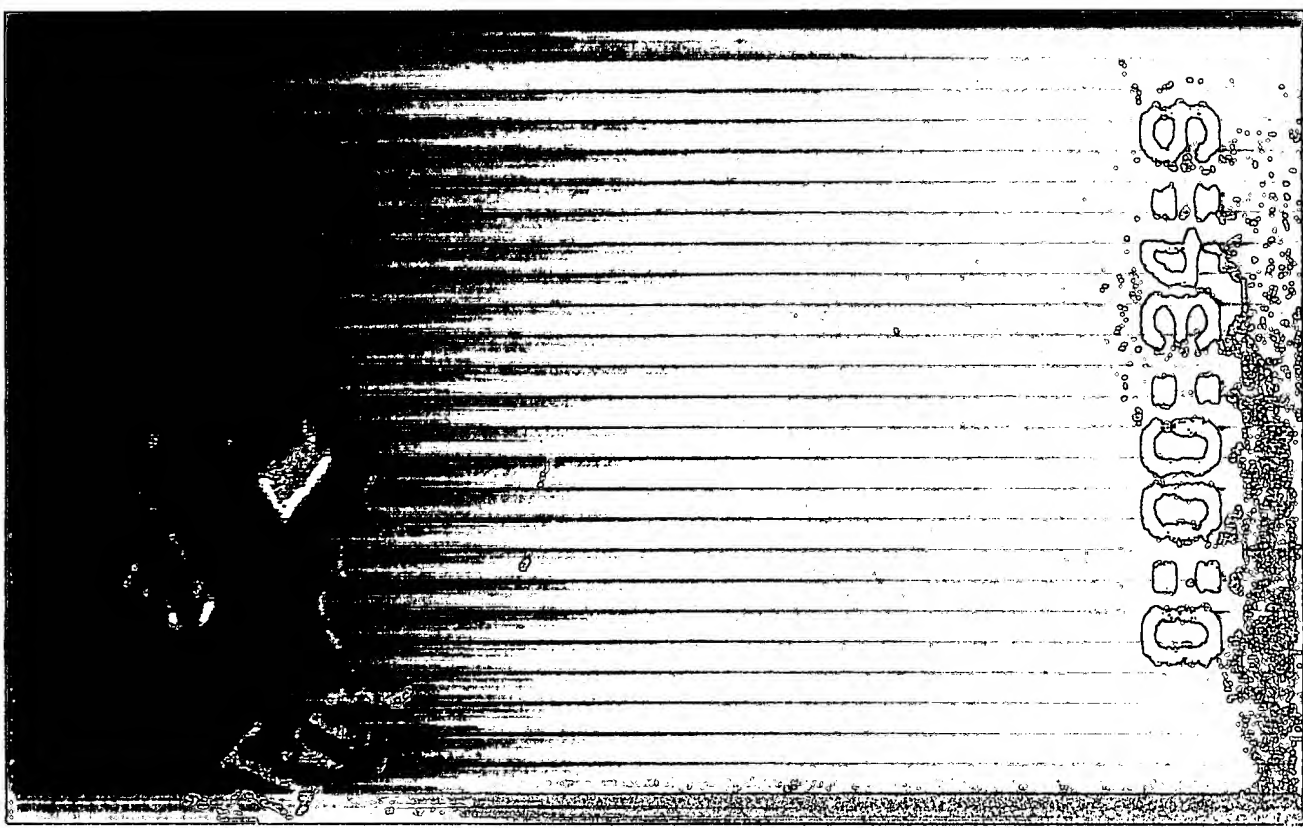
B-6-28

B-6-29

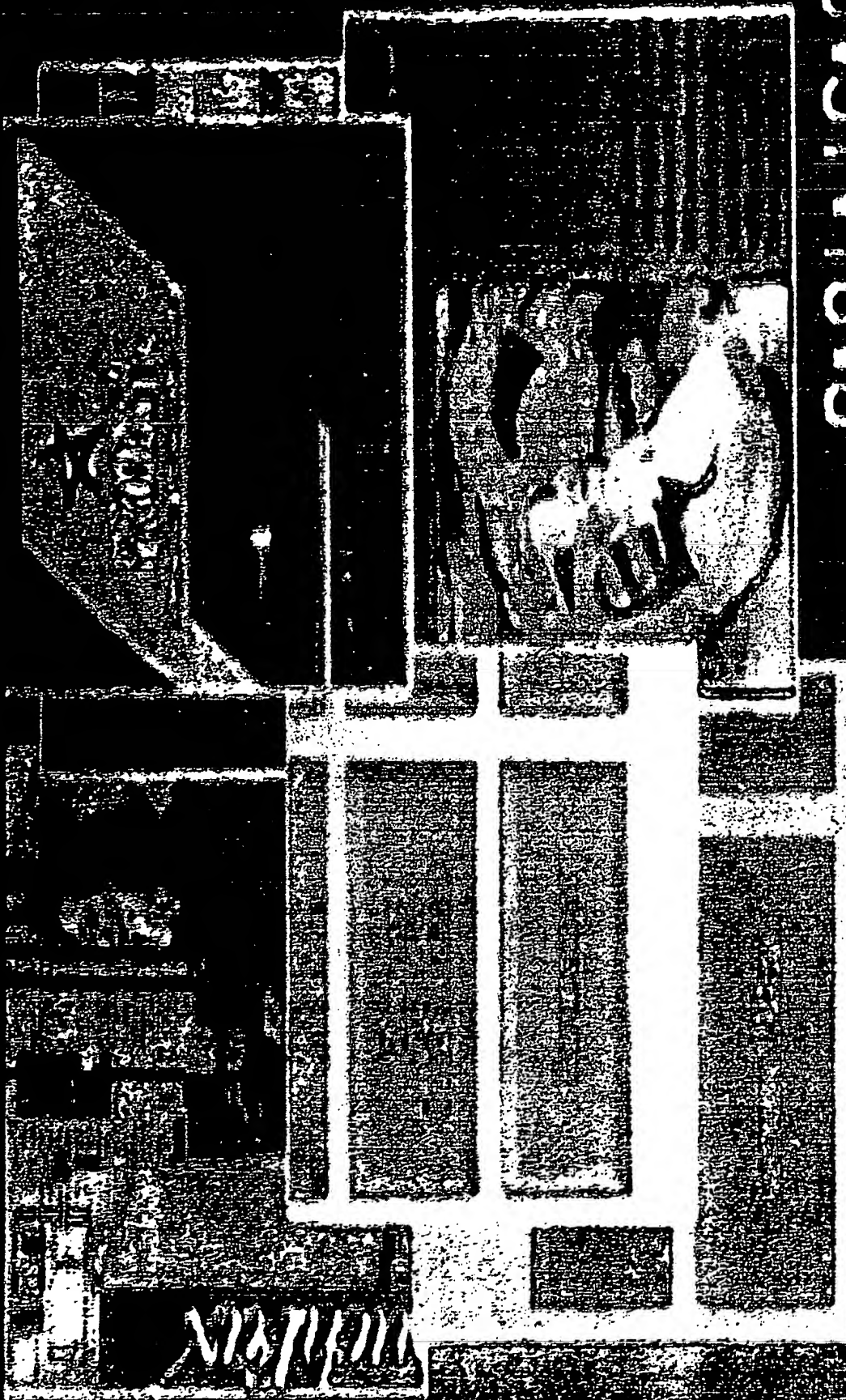
Internet

EXHIBIT
C, 4

04003429



B-6-30



0:01:16:6

EXHIBIT

C-6

B-6-31

TouchFax

TouchFax Provides The Ultimate In Place-Based Interactivity

By Allen Weiner, Editor

If you think of TouchFax Information Services, Inc., as a company that manufactures public fax machines, you have only part of the picture. In the rapidly growing arena of place-based media, TouchFax is creating products that will allow consumers the same sort of interactive capabilities as they will have with their home-based interactive appliances.

"We believe the information for the machine can be strategically designed for the location type so the type of services and the type of information that can be retrieved interactively on our terminals can be totally different from one machine to another," says John Massey, the machine's creator and chairman of the Lenexa, Kan.-based company.

"We always will have a basic set of common services that are available on all machines," he adds. "But, particular machines will have unique sets of advertisements and promotions on them, as well as related services that relate to the type of people that frequent a particular type of location."

And locations are key to the TouchFax family of products. Massey believes they are best utilized in places where "a number of different types of users can interact with their desired and preferred telecommunications service." Airports, hotels, truck stops, apartment complexes and even supermarkets are ideal for these multi-functional, multimedia machines.

TouchFax hardware products include three models of public terminals used initially as pay-per-use fax machines. They also can provide other services such as word processing and high-quality copies in addition to its primary communications capability of phone, fax and computer. Service products include personal fax mailboxes and information services which may be accessed by TouchFax public terminals and any private fax machines.

The TF Series public terminals are location specific and are designed to meet the space in which they will reside. For example, a lower cost unit designed for lower traffic locations also has a smaller paper storage capacity and would require more frequent service calls if placed in a high traffic location.

All TouchFax terminals use proprietary



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Attachment C 1

EXHIBIT
E

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software to create an easy-to-use visual control panel. This user interface to the machine is displayed on a touch-sensitive color video monitor which provides instructions to the user and on-screen buttons to operate the terminal functions.

Documents to be sent are scanned on a jam-proof flatbed scanning device which operates much like a standard copy machine. Payment for services is made by using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping.

"It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

TouchFax's TF750 is a free-standing kiosk with a high-resolution, 14-inch color touchscreen monitor, 386 microprocessor, high-volume laser printer, full-size keyboard and data port for modem and laptop connections. The TF450 is a built-in, wall-mounted unit that has an optional floor mount and offers the data ports for modem and laptop connections on an optional basis. The TF200 is a built-in, wall-mounted unit that offers a laser printer as an upgraded feature.

TouchFax offers two service products which adds to its flexibility—a fax mailbox service and electronic library. The TouchFax Mailbox is a centrally managed electronic service capable of storing fax messages. Mailbox subscribers are given a personal phone number to allow fax messages to be sent to their mailboxes, stored in the mailbox and retrieved at any time. To retrieve stored messages, the subscriber calls his mailbox number, enters a Personal Identification Number, enters the fax destination number and the system forwards the stored fax messages as instructed.

The TouchFax Electronic Library is a collection of information products organized by category. These information products are made available by combining information databases and high-resolution fax printer output with the ease of remote telephone communications. Information products are available on TouchFax public terminals and from any private fax machine.

On a TouchFax public terminal, the touchscreen provides an interactive dialog between the consumer and the information provider. For example, a consumer can select OAG FlightFax to get up-to-the-minute flight information, seat availability and fares. The consumer is guided through a series of video screens requesting their specific flight schedule. The TouchFax public terminal then sends the information via computer modem to OAG's database and a one-page personalized report is delivered to the TouchFax terminal by facsimile.

To access the TouchFax Electronic Library from your home or office requires a touch-tone telephone. A user responds to a series of audio prompts and directs the document to his home or office fax machine. For example, consumers can define the content of an up-to-the-minute special interest newsletter compiled from the news resources of *USA Today*.

Users also can request details of forecasters weather conditions in their destination city, maps and directions to specific locations, as well as city guides with suggestions on where to dine and what to see. Other services are oriented specifically toward entertainment and include popular business book summaries, personalized cartoon fax messages and event schedules.

In essence, TouchFax provides the future interactive appliance user a similar service to what he will be able to access with his Interactive Video Data Service terminal, touchscreen telephone or interactive cable device. So, home or away, the consumer can be interactive.

"The TouchFax is designed to emulate exactly what a person will be able to use in their homes," says Massey. "It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

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2

B-6-33

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B-6-34

VISION...

Leaders see the possibilities before they become obvious. The TF700 is designed with the understanding that the information age is just beginning. It incorporates the latest technology into an integrated system that can meet the communications needs of today and tomorrow.

POWER...

Every leader has a great mind. The "mind" of the TF700 is a powerful hardware/software system engineered to provide a comprehensive set of communication functions. TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location. The TF700 has the additional power to access other computer systems and enhanced fax services like our own InfoTouch™ electronic library.

VERSATILITY...

Leaders stay responsive to changing circumstances. The TF700 is a versatile platform that can adapt to take advantage of new technologies and opportunities, while meeting many present needs.

~~~~~Public Fax has arrived.

The TF700 is the most complete solution to the needs of the rapidly growing public fax market. It provides high quality fax, jam-free operation and plain paper output in a convenient, self-service terminal.

-----Information Access is the key.

The TF700's self-instructing touchscreen interface encourages the general public to utilize the many information databases available.

~~~~~Word Processing is a plus.

The full-sized keyboard offers the business traveler the perfect solution to composing and printing a letter or even personalizing a greeting card.

.....Video Advertising works.

The TF700's high-resolution color monitor provides a powerful medium to deliver advertising messages. In addition, each video ad screen can be linked to a printed coupon or sales literature that is instantly printed and delivered at the touch of a button.

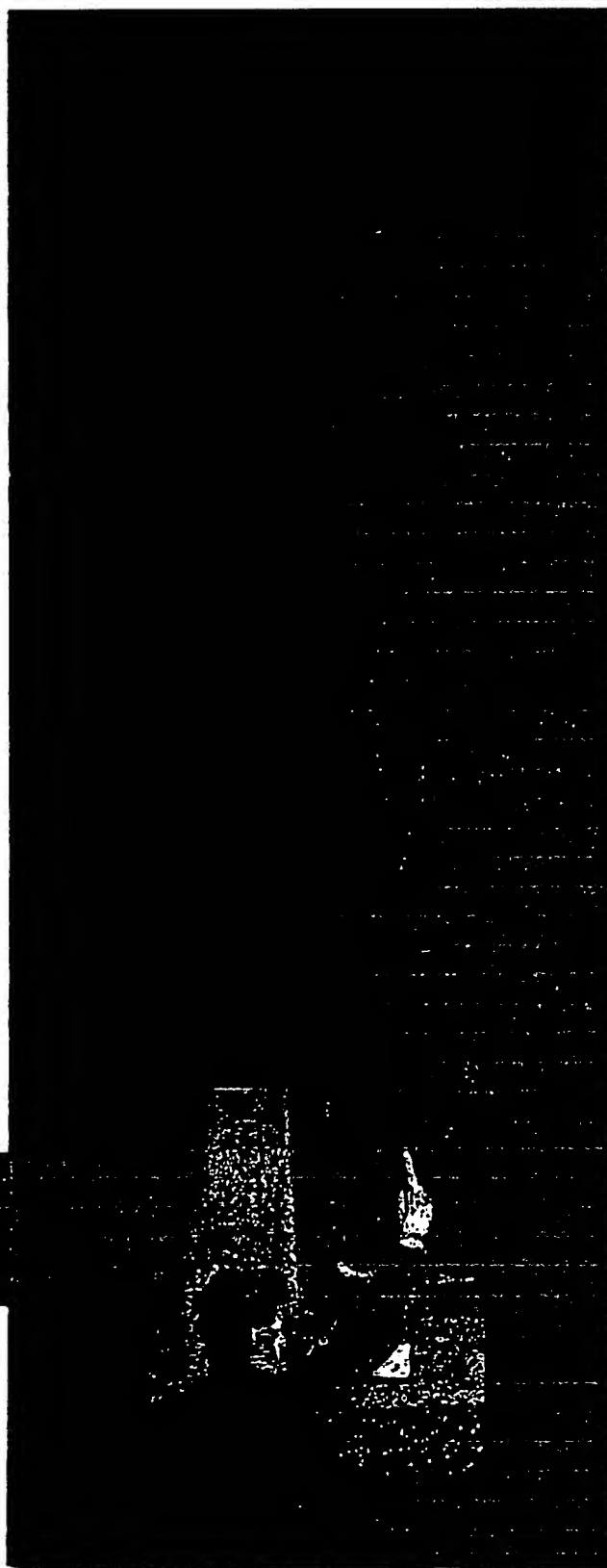
TF

The Public Communications Terminal
of Tomorrow... FOR Industry Leaders Today.

TouchFax INFORMATION
SYSTEMS, INC.

15520 College Boulevard, Lenexa, Kansas 66219
Phone: (913) 599-6639 (800) 869-7FAX (8329) Fax: (913) 599-5588

Exclusive European Distributor: Lantel & Coy Communications (Switzerland) Corp.
Grand Pré 70, CH-1271 Geneva 18
Tel.: 022 733 55 80 Telex: 022 733 52 19 Radioc: 751 763



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B-6-35

and quality public information systems. Public Communications Terminal from TouchFax.

The demand for public communication services is growing. Many organizations and communication companies in the world have seen the importance of the work. Several industry leaders have already responded by selecting TouchFax as their product of choice.

In the new TF700, TouchFax has combined precision engineering and powerful functionality to create the industry's most advanced personal communication center. At the touch of a few buttons, the new TF700 can put anyone in touch with the world through an extensive menu of services including:

telephone, send or receive faxes, photocopying, word processing, and laser printing, and access to a growing network of information databases from Wall Street news to international sports scores.

Handset and Hookswitch are AT&T quality, delivering high performance and durability.

External Speaker is built into the base, giving clear audio feedback of many signals, fax tones, or voice prompts.

Access Door provides convenient access to internal components, extra paper and supplies.

Ergonomically

Designed to be used

with a standard 110V

power source.

TouchFax is a registered trademark. © 1991 TouchFax.

TF

Public Communications Terminal



TF700 TouchScreen Monitor

offers crystal clear vision and displays information with sharp, bright colors.

Crystal Clear Vision

Offers a wide range of information, from on-line computer and fax information to printed information.

Full-sized Keyboard

controls the computer, database access, fax tones, and prints when not in use.

Optional Features

include a floppy disk drive, optical card reader, laptop or modem connections.

300-DPI Flatbed Scanner

delivers high resolution with fast scan times and no operator intervention.

Optional Features

include a floppy disk drive, optical card reader, laptop or modem connections.

300-DPI Laser Printer

offers crisp, high-resolution printing on plain paper and an optional 700 sheet paper tray.

Compact Footprint

of just 24" W X 28" D lets the TF700 fit in almost anywhere.

Touch

The Leader in Public Communications Systems

Now the information age is for everyone. The TF700 provides a friendly, touchscreen window to a universe of information available from on-line computer and fax information services. Never before has the public had easier access to such a wide range of printed information.

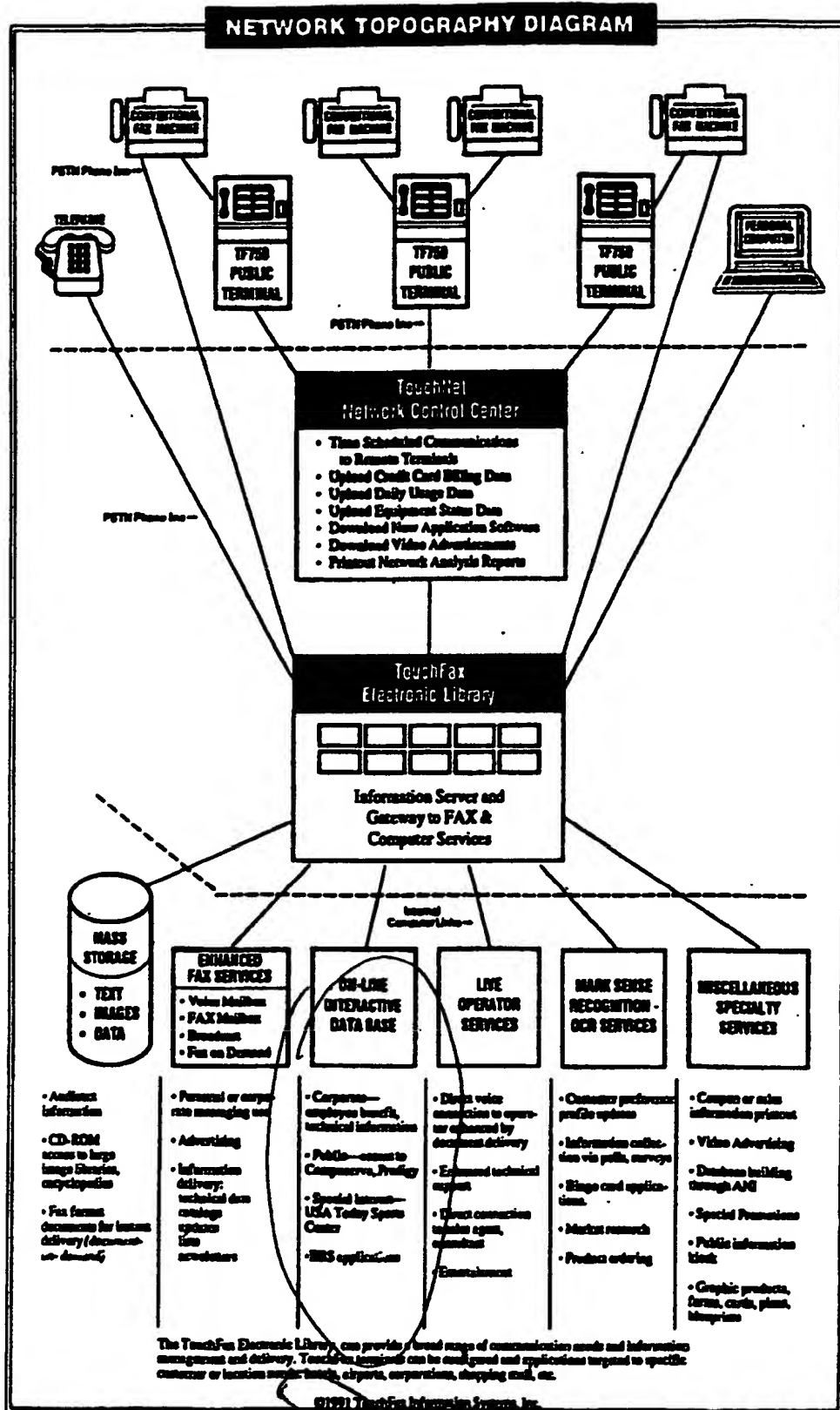
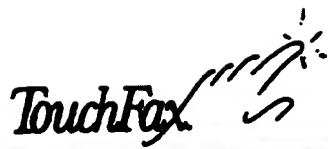
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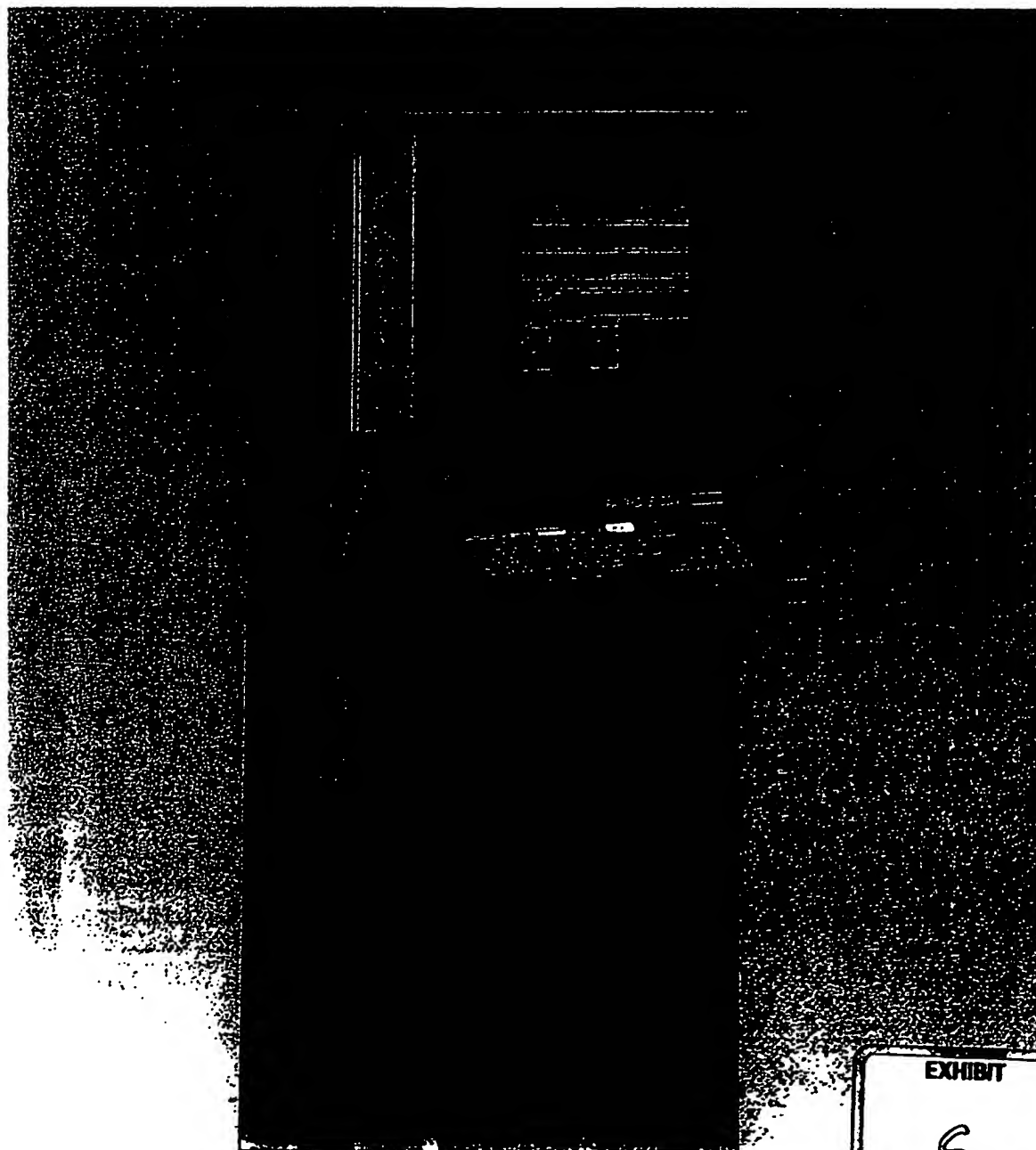
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ATTACHMENT E
EXHIBIT
D

B-6-38

ISDN console

Public telephone and telematic console



- Attachment F -

B-6-39



- Access to various new services and information sources
- Possibility of accessing a system operator specific data base
- Practical means of payment by means of cards
- Possibility of connecting a portable computer

Motivated by its policy of continuous innovation in telephone equipment, Landis & Gyr presents an advanced public telephone and telematic console, which illustrates the extensive range of services offered and whose role is to promote modern means of communication in crowded public places.

The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal.

Means of payment

Any of the main types of cards currently in use may be employed, namely:

- The Landis & Gyr optically coded prepaid value card,
- The «smartcard» (card with microprocessor chip) or
- The commercial magnetic credit card

For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.

Multiplicity of services offered

New services are offered to the user:

- Consultation of Videotex type data bases on the colour screen
- Possibility of connecting a portable personal computer to the telematic console by means of a special infra-red connector, thus providing the possibility of accessing specialized data networks.
- Increased help for the user by the display of instructions and menus on the screen, presented interactively and clear identification of the selections by means of special coloured keys.
- Digital telephone, providing a quality that is superior to that of a conventional analogue telephone together with a shorter time for putting the call through.

Videotex

The user has no difficulty in accessing the Videotex services available to the general public (also called Minitel, Prestel and Bildschirmtex, depending on the country).

These services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour.

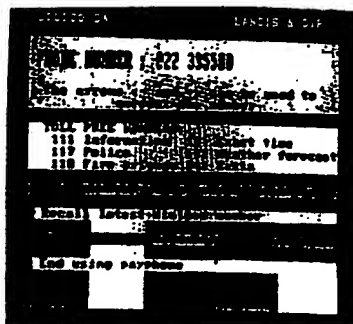
The various services already available include:

- Electronic telephone directory
- Electronic mailbox
- Telex transmission

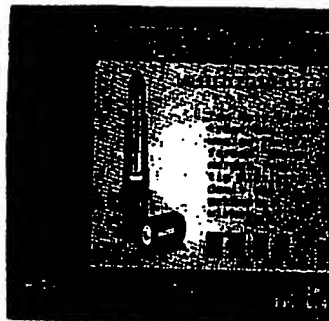
B-6-40

B-6 41

- Timetables of means of transport
- Reservation of seats with certain airlines
- Reservation of hotel rooms, hire cars, places for cultural and sporting events
- Teleshopping
- Telebanking



Main menu — a colour is attributed to each choice; pressing the key of the same colour on the keyboard causes selection of the desired function



The Videotex standard enables pages with a high degree of graphics to be created.



Data base specific to the system operator

In addition to the Videotex data base, the user also has access to a specific data base, restricted to the users of Landis & Gyr ISDN consoles. This private data base, when it is installed, offers services restricted to a definite geographic region,

for example: nearest chemists, street directory, proposed route to reach a given address, nearest bus stops, etc.

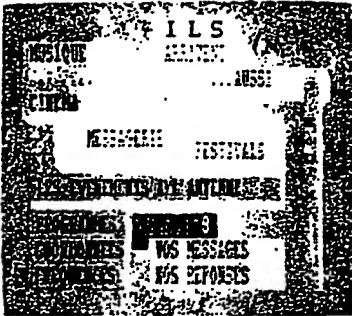
An easily used source of local information is thus available to travellers and tourists.

Use of a portable personal computer

The Landis & Gyr ISDN console makes it possible to link up to a computer centre from a public place.

The services accessible from a portable personal computer are those that are currently accessible via the specialized data networks, termed packet switching networks or type X.25 networks.

B-6-42



Page for accessing the Videotex server of a local radio station

These services may be classified in two categories:

- Link up to a private central computer and use of the portable terminal as a remote terminal to transfer data or carry out any other operation on the central computer (e. g. transfer of the orders obtained during the day, from the memory of a commercial traveller's portable computer to the central computer of the company).
- Connection to value-added services available on host computers (e. g. private electronic mailboxes, reference library data banks).

Profitability

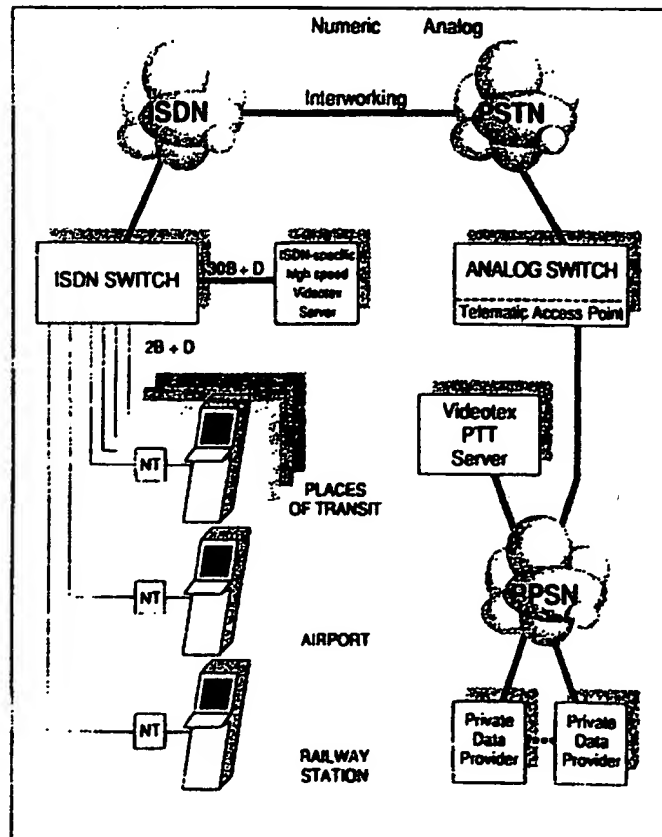
The operator of a system of Landis & Gyr ISDN consoles has considerable scope for making the investment profitable within a very short time:

- He may make a -private- data base service available to the public on a payment basis (value added service).
- He may also use the screen of the ISDN console for advertising purposes. It should be noted that when the screen of the Landis & Gyr ISDN console is not in use, which is the case in particular if the user is only making a voice communication, the operator may cause pages of advertising material to scroll past on the screen. These advertising pages are generated by

the system operator at a distance and then loaded via the network. They may include a high proportion of graphics so as to achieve maximum visual impact.

Maintenance

Landis & Gyr has applied the concept of remote maintenance to its ISDN consoles. This concept has already proved its value in the range of conventional telephone stations (BTG Remote Management Systems).



B-6-43

IS[

Put

- Access to the ISDN S bus, with possibility of use in a multi-point configuration
- Management of communication protocol on ISDN channel D (LAP-D and Layer 3, according to I.441 and I.451)
- During transmission of data on channel B, use of the X.25 protocol (LAP-B, Layer 3 X.25)
- Access to non-ISDN Videotext type information providers, by means of a TA a/b adaptor, installed as an option
- Once the possibility of user data transfer on channel D is provided, this service will be made available, in particular for administration of calls made on credit.
- Access to certain additional ISDN services, such as call back, multi-party conference calls, provided these services are available on the network.
- Multiple means of payment:
Landis & Gyr prepaid value cards
Cards incorporating a microprocessor chip (-Smartcards-)
Magnetic commercial credit cards
- Installation on semi-protected public sites
- Overall dimensions: 49x36x130 cm
- 9" colour screen
- Supplied from the mains

**Technical characteristics of
the Landis & Gyr ISDN console**

B-6-44

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South-East Asia	Landis & Gyr (S.E.A.) PTE LTD., 460 Alexandra Road 22-03, PSA Building, Singapore 0511. Tel.: 273 61 51, Tlx: 55 762, Fax: 273 25 25
Spain	Landis & Gyr BC S.A. Batalla del Salado 25, E-28046 Madrid. Tel.: 1/467 19 00, Tlx: 22975, Fax: 1/239 44 79
Sweden	Beving Elektronik AB, St. Eriksgatan 113A, Box 21104, S-10031 Stockholm. Tel.: 08/15 17 80, Tlx: 10040, Fax: 336 863
Switzerland	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 16. Tel.: 022/733 55 00, Tlx: 751 703, Fax: 022/733 52 19
United States	Landis & Gyr, Inc., 8 Skyline Drive, Hawthorne, New York 10532. Tel.: 914/347 26 30, Fax: 914/347 26 41
Other countries	Sodeco SA, 70 Grand-Pré, CH-1211 Genève 16. Tel.: 022/733 55 00, Tlx: 751 703, Fax: 022/733 52 19

LANDIS & GYR

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THE INTERNET NAVIGATOR

SECOND EDITION

Paul Gilster

SCIENTIFIC & TECHNICAL
INFORMATION CENTER

FEB 25 1997

PATENT & TRADEMARK OFFICE



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The Internet Defined

The Internet is a vast, sprawling network that reaches into computer sites worldwide. By its very nature, this interlinked web of networks defies attempts at quantification. Some sources cite Internet penetration into over one hundred countries, with twenty thousand separate networks feeding into it containing more than 2.5 million host computers and twenty million users.¹ Other sources give higher user figures, citing fifteen million people in the United States and twenty-five million worldwide who have used the Internet.² Indeed, estimates about the Internet's growth are proliferating almost as fast as new host computers on the network.

Consider that by 1985, approximately one hundred networks formed the Internet. By 1989, that number had risen to five hundred. The Network Information Center of the Defense Data Network found 2,218 networks connected as of January 1990. By June 1991, the National Science Foundation Network Information Center pegged it at close to four thousand, and, as we've seen, connections have more than quadrupled since then. If we extrapolate based on current numbers, the Internet could reach forty million people by 1995, one hundred million by 1998. Its current growth rate is 100 percent yearly.

Couple that information with an estimated 120-150 million personal computers in use worldwide and you've created a situation with dramatic possibilities. Few of the desktop computers in the average home, for example, are networked together. But many home and business computer users would like to access the Internet's rich resources. The solution: a modem and a dial-up account.

Until recently, it was difficult to access the Internet on a dial-up basis, but the increase in Internet service providers has improved that situation. In the past year and a half, estimates John Eldredge of Performance Systems International, a major service provider in Reston, VA, the number of individuals connecting to the Internet by dial-up has increased from 50 to 80 percent.³ And

B-6-48

commercial providers such as CompuServe, GEnie, and Prodigy have all made Internet mail access available. DELPHI and BIX have full Internet connections with access to all major services. Demand is intense. "We've seen an incredible response to our offering of full Internet services," says DELPHI general manager Rusty Williams. "It's been well received by current members and by other people looking for Internet service options—people in business, students, researchers, families."⁴ UNDX-based service providers tell much the same story of growth in the individual user market.

A BRIEF HISTORY OF THE INTERNET

The Internet's beginnings gave no hint that it would evolve into a publicly accessible network. Like many other great ideas, the "network of networks" grew out of a project that began with far different intent: a network called ARPANET, designed and developed in 1969 by Bolt, Beranek, and Newman under contract to the Advanced Research Projects Agency of the U.S. Department of Defense (ARPA).

The ARPANET was a network connecting university, military, and defense contractors; it was established to aid researchers in the process of sharing information, and not coincidentally to study how communications could be maintained in the event of nuclear attack. From humble beginnings—the ARPANET's founders originally contemplated letting only researchers log on and run programs on remote computers—the network grew. They soon added file transfer capabilities, electronic mail, and mailing lists to keep people interested in common subjects in communication.

But even as the ARPANET grew, other networks were under development, and it became clear that new methods of communicating would be necessary. As early as 1973, in an era of mainframe computing a decade before the desktop PC revolution took hold, ARPA, under its new acronym DARPA (Defense Advanced Project Agency)⁵ began a program called the Internetting Project. The goal was to determine how to link networks. Central to this concept of "internetting" is the need to overcome the different methods each network uses to move its information. When properly implemented, so-called *gateways* can be used to connect networks, passing traffic seamlessly from one to the other.

Finding the Right Protocol

Making internetwork links work requires the right protocol. In computer parlance, a *protocol* is simply a set of conventions that determines how data will be exchanged between different programs. Protocols specify how a network is to move messages and handle errors; using them allows the creation of standards separate from a particular hardware system. DECnet, for example, is a protocol used by networks running Digital Equipment Corporation computers; Novell, a familiar name in office networking, is another example of a protocol standard that allows computers to work together. Everything from the speed of the communicated data to the addressing schemes used to move individual message traffic is factored in the protocols used by a given network.

The Internet uses a protocol called *TCP/IP*, which stands for *Transmission Control Protocol/Internet Protocol*. IP is responsible for network addressing, while TCP ensures that messages are delivered to the correct location. These

B-6-49

powerful protocols were developed in 1974 by Robert Kahn, a major figure in ARPANET development, and now president of the Corporation for National Research Initiatives (CNRI), and computer scientist Vinton G. Cerf, now president of the Internet Society and vice-president of CNRI. Their pioneering work created the mechanisms by which the Internet could appear. In fact, if we are looking for a quick definition of the Internet, we can simply say that it is a network of networks that run the TCP/IP protocol suite.

If you will fall into the habit of thinking of the Internet as a metanetwork—a network made up of interconnecting networks—you will grasp the dispersed, decentralized nature of this enterprise. Around the world, connecting through special computers called *routers* and *hubs*, computers from different manufacturers running a whole range of operating systems can communicate with each other. Digital Equipment Corporation minicomputers can talk to Sun Microsystems workstations. Standalone PCs and Macintoshes can talk to Intel machines on office networks; they, in turn, can reach large-scale regional networks, which connect their high-speed circuits over a grid called a *backbone*.

You should realize that TCP/IP is not the only protocol for connecting a variety of different networks. The Internet is actually becoming a multiprotocol network, integrating other standards into its operations. Chief among these is *Open Systems Interconnection*, or *OSI*. Developed by the International Organization for Standardization (ISO), OSI has been widely embraced in Europe, where the momentum of TCP/IP has been less overwhelming than in the United States. Systems using other protocols likewise connect through gateways to the Internet; BITNET, for example, is a network that communicates using its own standards, but which is at least partially accessible to the Internet through such linkages. And the UNIX-to-UNIX Copy Program (UUCP) network connects thousands of computers by dial-up telephone lines; its electronic mail destinations are likewise available to the Internet user.

THE INTERNET VS. COMMERCIAL ONLINE SERVICES

Commercial on-line services like GENIE and DELPHI take an entirely different approach to distributing information. If you have been a user of one or more of these systems and now want to dial into the Internet, you must master the differences between the two models. CompuServe, for example, manages its huge user base through a centralized set of computers. When you call into local telephone numbers around the world to gain access to the system, you are connecting ultimately to a centralized set of resources. More telling is the fact that the commercial operation is managed from the top as a business. There is a company behind CompuServe, just as there is behind BIX and DELPHI.

Not so with the Internet, which has grown up free of both the advantages and problems caused by management from the top. This is why, when you connect to the Internet, you must choose from among a wide range of service options (we examine these in the next chapter). No central sign-up facility exists for the Internet; rather, you make contact with a service provider who allows you to gain access to the network through local computers. The consequences of this decentralization on network resources are likewise strong. What you find on the Internet depends on the decisions of thousands of system administrators around the world. No single company has made an

B-6-50

overall decision about network design, which makes mastering the search tools we will examine later a critical part of your explorations.

What Is Packet Switching?

Consider the great problem of networking diverse computer systems. You would like to move a stream of data from one computer across a communications link to others. How does the data get there, and how can we ensure that when it does so, it arrives in precisely the condition it was when it left? Can we be sure that our addressing scheme works, and that, in the event of a network failure, our data will be rerouted so that it reaches its destination? These are problems that network protocols must address. The Internet uses a scheme called *packet switching* to solve them.

Packet switching takes data and breaks it into parts, giving each segment a header with the necessary routing information. Computers on the network examine these headers and move the data packet along to the next site. Each time, the packet gets closer to its destination. A major bonus of packet switching is that the computers routing this data can select alternate routes when a given link fails (remember, this system was developed by researchers who were considering how to ensure reliable communications when parts of the network were destroyed in a nuclear conflagration). Another bonus: The computers at either end of a packet network connection can operate at different speeds; the network itself acts as a buffer to adjust for the difference.

You may also have run across the term *circuit switching*. Think of one-to-one contact here. If you set up a data session between two computers using ordinary telephone lines, placing a call whenever you need to move data, you would be using circuit switching. The method is useful when you need to connect computers to transfer large amounts of information. But because it requires you to set up a circuit dedicated to an exclusive use each time you use it, circuit switching is unable to handle the massive amounts of diverse data carried by the Internet. Complex applications requiring contact with multiple computers must rely on the packet switching model.

The Internet Emerges

In 1993, the U.S. Defense Communications Agency mandated TCP/IP for all ARPANET hosts. In doing so, it established a standard by which the Internet could grow. From this point forward, it would be possible to add more gateways, connecting more networks, while the original core networks remained intact. Most people date the true arrival of the Internet at 1983, the year when the original ARPANET was split into MILNET—to be used for military communications—and the ARPANET—for continuing research into networking. But, as early as 1980,⁶ CSNET, a network linking computer science departments in several states, became the first autonomous network DARPA allowed to connect to the ARPANET.

CSNET eventually merged with BITNET in 1989. The ARPANET itself was decommissioned in June 1990, its functions absorbed into the broader structure of the Internet. But the two networks had established a workable principle: let networks communicate by a set of protocols, with new networks being added to an ever-growing metanetwork communicating through gateways. That principle

B-6-51

depths of the world's fastest supercomputers to 1200 bps dial-up modems moving electronic mail traffic into some of the world's poorest countries. Clearly, a directory of all its constituent networks would be a massive volume which would quickly pass out of date. Users interested in tracking down network structure will, however, be interested in Tracy L. LaQuey's *The User's Directory of Computer Networks* (Digital Press, 1990) as well as John S. Quarterman's *The Matrix* (Digital Press, 1990); both are excellent starting points. And anyone seriously attempting to monitor network growth will learn that an active on-line presence is critical.

The Big Three Internet Applications

As Douglas Comer points out in his *Internetworking with TCP/IP. Vol 1: Principles, Protocols, and Architecture*, what you as an end user see of the TCP/IP protocols is a set of application programs that enable you to use the network to good advantage.¹² You and I don't need to know the intricacies of how TCP/IP functions, though if you're curious, there's no better or more respected guide than Comer's work. But running the programs themselves is not difficult, as we'll see.

Users of dial-up computer services, like users of bulletin board systems (BBS) and commercial on-line services, have come to expect certain capabilities from their providers, which the Internet provides in its own way through TCP/IP.

Here is how the Internet delivers these basic functions.

ELECTRONIC MAIL

Electronic mail is the most elementary service, and for many users, the most useful. Many people on the Internet have used nothing but electronic mail and still find the network indispensable. You can send messages to one or more people, deliver text files, retrieve information by automated computer programs like LISTSERV (through a gateway to BITNET), and more. While access to all three of the major Internet services is vastly preferable, it's possible to do quite a lot with electronic mail alone. A good thing, too, for aside from DELPHI and BIX, the only major on-line services with a full-fledged Internet connection, there is only limited access to the Internet from the other commercial services. That means, as we'll see in Chapter 3, you have three choices:

1. Learn to use the Internet through mail alone (Chapter 8 shows you how much you can do with such a connection).
2. Use DELPHI or BIX's full-service connection.
3. Get an account with one of the full-service dial-up providers discussed in Chapter 3 (more on these options there).

Ironically, in the early days of the ARPANET, electronic mail was considered an insignificant add-in to network capabilities. No one anticipated the high volume of traffic that began to flow as scientists exchanged ideas with geographically distant colleagues. Today electronic mail is taken for granted, from small companies with office networks to giant corporations linking remote offices worldwide. Its growth has been just as strong on the commercial networks, many of whose members maintain accounts solely for the e-mail connectivity they provide.

B-6-52

FILE TRANSFER

Moving files between computers is one of the handiest features of the networking revolution. If you can find something you can use—and if it's made publicly available, as are thousands of computer files on the Internet—you can transfer it to your computer. The process is called *file transfer protocol*, or FTP. You access documents made available to the public through a procedure called *anonymous FTP*. This procedure allows you to log on to remote computers and use the resources in directories the administrators have made available to the public. Anonymous FTP will be a major tool as we retrieve files and build an Internet library later in this book.

With FTP procedures, the Internet gets challenging indeed. Instead of consulting a single library source, as on CompuServe or GENIE, for a catalog of files, you are faced with thousands of computer sites offering programs and text files. To track down the program you need easily, you should learn about the access tools we'll discuss later. With them, you can locate programs, then use FTP to move them from the source computer to your service provider's computer at high speed, and subsequently download them to your own machine.

REMOTE LOGIN

Remote login, otherwise known as Telnet, provides the ability to connect to a remote computer and work with it on an interactive basis. Again, the Internet opens the doors to a worldwide computing environment, on many of whose connected machines are services, databases, and other resources that can be examined and manipulated. By using Telnet, you can log onto the library catalogs of distant universities, look for information about everything from the formation of distant galaxies to recipes for potato soup, and examine Supreme Court decisions or the lyrics of popular songs. All the while, your computer will act as a terminal of the remote computer, which will respond to your command. In many cases, menu-driven systems at the other end make interactive sessions intuitive, but some systems are considerably easier to work with than others.

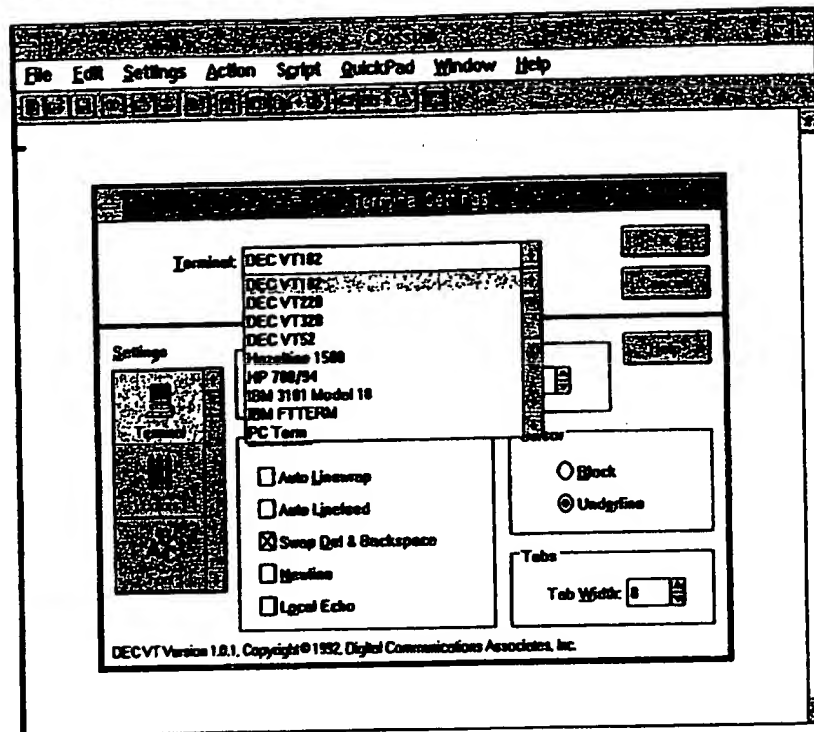
Note that when the network called "the Internet" is referred to in print, it always has a capital I. But you may also see abundant references, if you prowl your bookseller's shelves for computer books or read the computer press, to general terms such as "internets," "internetting," and "internetworking." Remember that TCP/IP can pass information among computers that aren't on *the* Internet. Your company, for example, might have local area networks in a number of sites. At some point, it would make sense for management to link those LANs together. One way of linking them is through TCP/IP. Your company would have established an *internet*, but you're not on *the Internet* unless you decide to be.

Public Packet Switching Networks

We have already discussed packet switching, and how it breaks messages into segments, each of which contains the necessary addressing information to ensure safe delivery. The ARPANET was the first major packet-switched network, running on an experimental basis for the use of DARPA contractors and not open to the general public. But as a dial-up modem user, you have probably encountered another form of packet switching, as used by networks like BT Tymnet or SprintNet. These public networks allow you to contact distant computers with a local telephone call; they then route your computer traffic to the appropriate destination.

B-6-53

Figure 3.1
Crosstalk for
Windows, terminal
emulation choices
from the Settings menu.



SIGNING ON—A PERSONAL ODYSSEY

Commercial access to the Internet has improved so dramatically in the past two years that newcomers will be startled to learn that there was a time when the process was excruciating, although many early treatments of the subject made it sound like a snap. "Need access? Just ask your system administrator," they blithely said, assuming you wouldn't ask if you weren't already working on a network in the first place. And indeed, if you were already on a network, the advice was sound. Many people to this day don't realize they can connect through their work site and that, in such cases, a simple request is usually enough to get them up and running.

But it was a different story for anyone who was trying to log on by modem from a standalone computer. For me, logging on to the Internet became something of a crusade, deepening into obsession as I continued to run into a stone wall. Several years ago, I made the mistake of asking this question: "I work out of a home office. I don't have Internet access and I don't have a system administrator. What do I do?" I asked people in my area and looked for answers on various on-line services. I peppered local bulletin boards for advice and called computer gurus in Research Triangle Park, pestering some poor souls for months.

The result? "Try the universities," some said. I called Duke, UNC, North Carolina State; access there was restricted and no one I spoke with knew how to get it. Maybe if I was a student. Unfortunately, my years at UNC had ended in the mid-1970s. "Call some of the big corporations," I was told. "Someone out there might be able to get you an account." I didn't know what I was doing, but

B-6-54

I began to make these calls. Most people didn't know what I was talking about. Those who did seemed incredulous that I would ask. "Network connections are private," they said.

Network connections private? If that doesn't give you something to think about, what does?

The Internet is not CompuServe or Prodigy. Lacking any central organization, the network has no billing address. You can't make a phone call to a network office and say, "Sign me up." You'll also get confused by the plethora of possibilities some of the people who are already on the network will tell you about. "Do you want a full connection?" they'll ask, and you reply, "Sure," not understanding why you would want anything else. "The best we can do is SLIP," you may hear. SLIP? What does it mean? And why do these people I'm talking to have nothing better to offer? Is SLIP some kind of restricted access?

It wouldn't be until CONCERT-CONNECT came along that I made my real plunge into the Internet. CONCERT-CONNECT was a service provider which, among other options, made possible local dial-up access to the Internet. It brought order into the North Carolina Internet scene by offering a flat rate per month, allowing you to log on to the computers at MCNC (formerly the Microelectronics Center of North Carolina, now known solely by its acronym, as are many computer organizations). The flat rate was attractive, as were the services; not just USENET newsgroups, but FTP and Telnet as well; not just electronic mail, but the whole panoply of features that make the Internet so fascinating.

Today, CONCERT-CONNECT is gone. In its place are a growing number of Internet service providers, each offering dial-up access. Many also offer more advanced forms of network connection, including the aforementioned SLIP (which we'll discuss in this chapter), and other forms of direct links all the way up to high-speed dedicated T1 and T3 lines. My new service provider is Interpath, a division of Capitol Broadcasting Corp., here in Raleigh. Interpath is representative of the new breed of service provider, offering network connections to a great variety of customers from individual home users to the largest businesses.

What a change. In every state, service providers are springing up; indeed, Internet access is becoming a growth industry, bidding fair to create a price war that will be followed by an inevitable period of consolidation. For you, the individual or small business user, the good news is that prices are dropping across the board. CONCERT-CONNECT once charged \$175 per month for SLIP access; Interpath is now offering comparable service for \$37.50, and regular dial-up access is cheaper still. If it's a full-service access provider you're looking for, finding one will keep getting easier. No provider in your area? There will be soon.

Even more options are appearing from the ranks of the commercial on-line services like CompuServe and DELPHI. In fact, all of the major on-line services now offer some form of Internet connectivity, even if only a gateway that allows you to send and receive mail to and from the Internet. DELPHI and BIX have moved aggressively to open full-access provisions. America Online is beginning to widen its existing mail-only gateway with a host of new services including USENET newsgroups and access to the superb Internet interface and display tool called Gopher. Watch for announcements from the other commercial services; Internet access is now the hottest ticket in town as the networks grow together into a true global matrix.

We will work our way up the access ladder to show you what options are available. If you are already on the Internet, you won't need to read the following

B-6-55



Electronic Mail as a Gateway to the Internet

File Transfer Protocol and electronic mail are both key components of Internet connectivity, but what do you do if you only have an Internet mail connection? After all, with the exception of DELPHI, BIX, and America Online, the major commercial on-line services offer only mail connectivity. Fortunately, your on-line mailbox with a commercial provider like CompuServe or GENie can become a true gateway into the Internet. You won't be able to accomplish everything—in particular, Telnet simply can't be managed by mail alone—but if you are looking for files, you'll be pleased to know you can use electronic mail to retrieve them, without needing to employ FTP procedures yourself.

This chapter is devoted to people with accounts on the CompuServes and GENies of this world. Let's be clear on this: The optimum connection for a dial-up user is a full-access account with an Internet service provider, because it gives you the ability to use all three key Internet protocols—e-mail, FTP, and Telnet. But maybe you're hoping to shop around on the Internet first, to see what's available. Or perhaps you use CompuServe daily and would like to streamline your operations, running everything through your account there. Whatever the case, if you need to transfer files by mail, you can do it. The solution is workable, and while it's not exactly elegant, it does what you want it to do.

B-6 56



What you need: A background document on Internet Faxing.
 The Document: FAQ: How Can I Send Fax from the Internet.
 How to Get it: The document is posted regularly on the USENET newsgroups alt.internet.services and alt.online.service. alt.bbs.internet. If answers and new answers you can also receive new editions automatically by sending an alert this address: navet@rahulnet.vsnl.net asking for added to the distribution list.

FINGER BY MAIL

finger is a program we discuss in Chapter 14 which allows you to retrieve information about users and, in some cases, about a wide variety of information such as earthquake updates or popular music. Normally, finger is run as a program on your UNIX service provider's computer. However, you can also use electronic mail to send and retrieve the results of finger queries. To do so, send e-mail to:

b.110@icott@ic.ac.uk

In the Subject: field, put this command: `#finger user@site` where `user@site` is the address you want to reach. You will find a list of potential finger sites in Chapter 15's directory.

Suppose, for example, that you want to retrieve NASA headline news. The address is nasanews@space.mit.edu. Your e-mail request would then read:

`#finger nasanews@space.mit.edu`

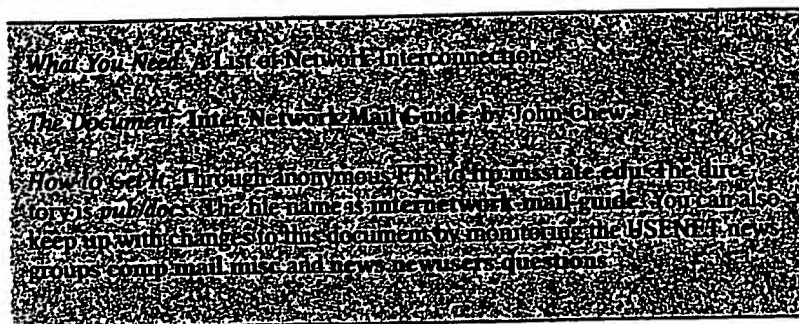
placed in the Subject: field of the message. Sending this, you will shortly receive an update on NASA press releases.

SENDING ELECTRONIC MAIL TO OTHER NETWORKS

If you have any doubts that Internet electronic mail opens out to networks across the world, consider the evidence of John J. Chew's *The Inter-Network Mail Guide*, available on the Internet both as a posting in various USENET newsgroups and also by download with anonymous FTP. Chew tracks the ways in which the various commercial providers maintain links to and from the Internet, and his list is growing with each new posting. A glance through it reveals linkages to such varied providers as Geonet Mailbox Systems, BIX, GreenNet, KeyLink, PeaceNet, SprintMail, and AppleLink, to name literally but a few. Chew's list will come in handy, and I advise you to get a copy.

Now you will learn how to send mail from the Internet to addresses at the major on-line services.

B-6-57



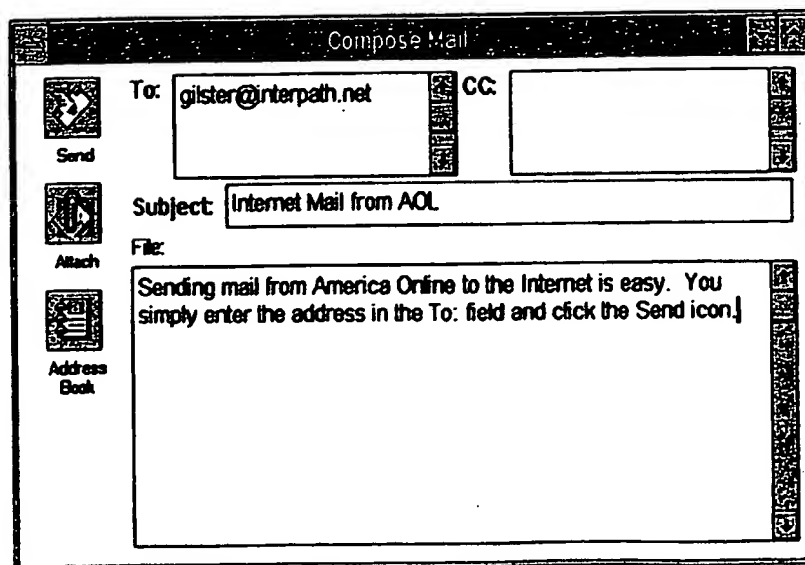
America Online

To send mail from the Internet to America Online, the syntax is `username@aol.com`. The user name should be all lowercase, with spaces removed.

Outgoing messages cannot be any longer than 32k. On the PC version of America Online, incoming mail cannot be any longer than 8k, which effectively prevents your using this service for ftpmail file transfers. On the Mac version of America Online, as well as the Apple II version and PC-Link, incoming mail cannot be any longer than 27k. All characters except newline and printable ASCII characters are mapped to spaces. Users are limited to seventy-five pieces of Internet mail in their mailbox at a time.

To send mail from America Online to the Internet, simply enter the Internet address and write your message. Figure 8.19 shows the process in action.

Figure 8.19
Sending a message to
the Internet from
America Online.



B-6-57

BIX

To send mail from the Internet to BIX, the syntax is `username@bix.com`. To send mail from BIX to the Internet, enter the Internet address preceded by `to at the Mail: prompt`. The following is an example of a message being sent from BIX to the Internet:

```
Mail:to gilster@interpath.net
Enter subject: Mailing from BIX
Enter text. End with '. <CL>
```

This message is to test BIX's connections to Internet e-mail.

```
send/action:send
Sending..Memo 76679 sent
```

There are no size restrictions on BIX messages to and from the Internet, and no monthly or per-message fee for Internet mail. You can move up to 10MB per calendar month (in both directions, to and from the Internet), without any additional charges. Beyond that, the charge is \$1.00 per 100k transferred. Messages can be up to 0.5MB in length in either direction; longer messages may be truncated.

CompuServe

To send mail from the Internet to CompuServe, the syntax is `usernumber@compuserve.com`. CompuServe user numbers contain commas, which must be changed to periods when you send from the Internet. Thus 12345,6789 becomes 12345.6789. To send me a CompuServe message, for example, you'd send to 73537.656@compuserve.com.

To send mail from CompuServe to the Internet, as just shown, lead off the address with `>INTERNET:`. Sending a message to `ftpmail`, then, requires the address:

```
>INTERNET:ftpmail@decwrl.dec.com
```

DELPHI

To send mail from the Internet to DELPHI, the syntax is: `username@delphi.com`. To send mail from DELPHI to the Internet, use the word `internet` followed by the recipient's name (with no spaces in between) enclosed in quotes. On DELPHI, to send a message to `ftpmail`, for example, you would address it to `internet"ftpmail@decwrl.dec.com"`. The following is a sample message from Delphi to the Internet:

```
MAIL send
To:      internet"gilster@interpath.net"
Subj:    Test Message
Enter your message below. Press CTRL/Z when complete, or CTRL/C to quit:
Checking the DELPHI connection to the Internet.
^Z
```

B-6-58

Genie

To send mail from the Internet to GENie, the syntax is `username@genie.geis.com`. To send mail from GENie to the Internet: After entering the Internet address, you are prompted for additional GENie addresses, copies, and a subject line. You can then enter your text. Figure 8.20 shows a GENie message to an address on the Internet as it is being composed. GENie's Internet mail services cost \$3.00 per hour.

MCI Mail

To send mail from the Internet to MCI Mail, the syntax is: `username@mci-mail.com`. MCI user names should have spaces removed. Thus Sam Spade becomes `Sam_Spade@mcimail.com`. Conversely, it's possible to use an MCI user number. If Sam's number is 123-4567, simply remove the dash. Thus `1234567@mcimail.com`. If there happens to be more than one Sam Spade in the MCI directory, you can reach the desired party by sending to:²

`Sam_Spade/1234567@mcimail.com`

To send mail from MCI Mail to the Internet, use the EMS option. Here's how to do it:

- At the TO prompt, type recipient's name and the word EMS in parentheses.
- At the EMS prompt, type **INTERNET**.
- At the MBX prompt, type the recipient's Internet address. Note: If the Internet address exceeds eighty characters in length, you must split the

Figure 8.20
Sending a message to
the Internet from
GENie.

Enter Destination GENie Address or C/R to continue.
?

Would you like to receive a copy of the message? (y/n) ?n

Enter the subject of your Internet message (max 30 characters) or C/R for no subject.
<.....>

Mailing from GENie

When you see the prompt, 1>, enter your message.
When you have finished entering your text, use the *S.
to send the Internet message. Use *X to exit without sending.

Enter Internet text.

Queued	Item	From	Length	Sent	Subject
1	6239343	GENIE.NIGHT	268	93/05/27	New Pricing Effective July 1st

1>GENie prompts the user through the mail process, so sending mail to the Internet is relatively simple. You will be prompted for additional addresses for your message, asked if you'd like a copy of it, and given >space to enter a subject line.

B-6-59

address into multiple MBX lines. The split should occur at one of the following characters: @ ! %.

- Only one Internet mailbox may be used with an individual TO or CC recipient.
- Complete the mailing procedure as usual.

Figure 8.21 shows an example of sending a message to an Internet address from MCI Mail.

Prodigy

Prodigy is the huge commercial service created by IBM and Sears. To send mail from Prodigy to the Internet, you will need a program called Mail Manager. Jump to *About Mail Manager* while on-line to learn how to download it.

To send mail from the Internet to Prodigy, use the Prodigy user ID followed by the domain name. Thus, to send mail to klbc98x, you should address the message to klbc98x@prodigy.com.

MAILING LISTS AND ELECTRONIC JOURNALS

A huge variety of mailing lists is available to people with electronic mail access to the Internet. So much is available here that it would make little sense

Figure 8.21
Sending a message to
the Internet from MCI
Mail.

```

EMS:      INTERNET
          EMS      376-5414 INTERNET          NRI          Reston

Enter recipient's mailbox information.

MBX:      mike_banks@bix.com

If additional mailbox lines are not needed press RETURN.

MBX:

TO:      Mike Banks
          EMS: INTERNET / MCI ID: 376-5414
          MBX: mike_banks@bix.com

Is this address correct (Yes or No)? y

CC:

Subject: MCI Mail Check

Text: (Enter text or transmit file. Type / on a line by itself to end.)

Mike:

Please let me know if this message gets through OK. It's routed to
your BIX account via MCI Mail.

Thanks!

Paul

```

B-6-60

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B-6-61

internet

The Magazine for Internet Users of Nov/Dec 1994

\$4.95
\$3.95

WORLD

CHATTER

• NEWSGROUPS

• VIRTUAL ENCOUNTERS

• DIGITAL RIGHTS

• SUPERNATURAL SITES

CHATTER



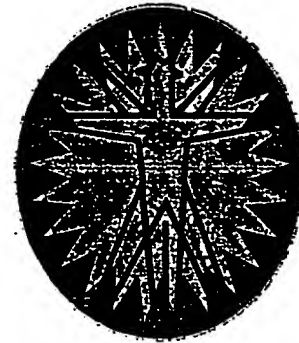
Display Unit December 1994

Attachment 6

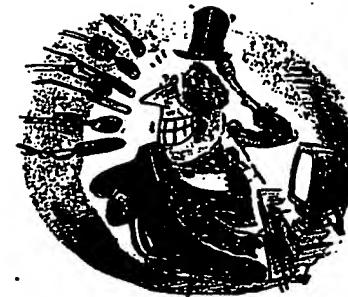
B-6-62

Departments

LETTERS TO THE EDITOR	4
FROM THE EDITOR by Michael Neubarth	6
INTERNET NEWS	10
INTERNET BOOKSHELF Edited by David Dean	104
POINTERS	108
INTERNET FORUM	108
INDEX TO ADVERTISERS	112

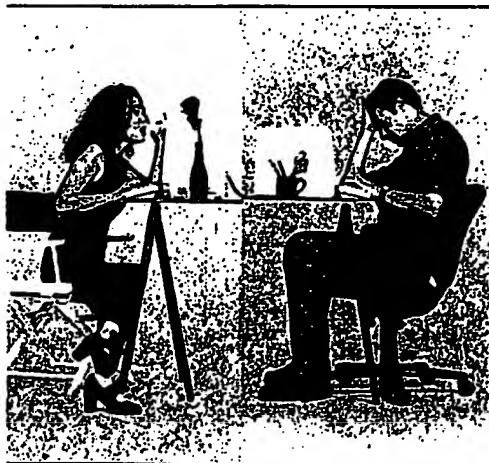


78



99

c o n t e n t s



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86

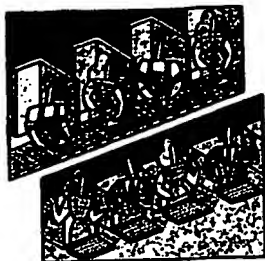
Columns

THE SURFBOARD by Andrew Kantor and Eric Berlin	14
NET PROFITS: Power Rap by Christopher Locke	18
INFO HOUND: Herbs, Ella, and IRC by Dave Taylor	22
ENTRY LEVEL: Learning the Ropes: A Usenet Style Guide by Andrew Kantor	24
DIVING INTO THE INTERNET: Internet: Going South by Joel Snyder	94
FOUND IT ON THE NET: Work or Play? by Linda I. Engelman	96
THE INTERNET CURMUDGEON: Painting the Right Picture by Daniel P. Dero	99
ARTIST AT LARGE: Going Graphical (There's No Place Like Home Page) by Kenny Greenberg	102

B-663



64



Features

USENET: Past, Present, and Future by Dave Taylor	26
SECRETS FROM WITHIN USENET by Kevin Savez	31
NEWSREADERS: An "n" User's Guide by Robert Sanchez	34
NEWSGROUP CULTURE by Robert Sanchez	38
DOUSING FLAMES by Kristina Harris	42
VIRTUAL ENCOUNTERS by Thomas Barrett & Carol Wallace	45
THE EX FACTOR by Brad Stone	50
GABFEST—INTERNET RELAY CHAT by Aaron Weiss	58
ALL THE NETNEWS THAT FITS Interview with Brad Templeton of ClariNet by Jeff Ubeis	64
SERVING ADS by Joseph Raben	70
ANATOMY OF LISTSERV by Karl Signell	76
DIGITAL RIGHTS by Jean Erhard	78
ALIENS AMONG US by Andrew Kantor	82
WHY TEACHERS FEAR THE INTERNET by Crawford Kilian	86
SUPERNATURAL, STRANGE, AND SINISTER by David R. Noach	88

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B-6-64

Aliens Among Us

A horde of new users from America Online, CompuServe, GEnie, and Prodigy is coming onto the Internet.

By Andrew Kantor

If you listen carefully, you can hear the grinding of gears and the creak of metal. The big guns of the on-line world—America Online, CompuServe, GEnie, and Prodigy—are slowly turning and taking aim at the Internet, and cyberspace will never be the same.

For users of these services, the next few years will see the opening of a doorway (gateway, rather) to a vast and almost uncharted resource. For veterans of the Net, it means an influx of new users (often referred to in a less-than-friendly tone as "clueless newbies") that puts the college September Rush to shame.

There has already been a test case: a virtual sacrifice to the gods of the Net, if you will. America Online (AOL) expanded its Internet services in March 1994, making Usenet Newsgroups accessible to its users. But those users quickly learned the hard way that the Internet did not have an enforced Terms of Service to keep users friendly. They were faced with a barrage of verbal attacks. Their crime? Simply not knowing where to post their messages. But on the Internet, ignorance is never an excuse, and there is no friendly sysop only an instant message away.

Of course, from the Internet users' point of view, thousands of postings from aol.com were suddenly invading the Usenet, often in inappropriate newsgroups. ("Someone searching for family in Oregon should know enough not to post in alt.best.of.internet," says one Usenet veteran.)

America Online learned some valuable lessons that the other services should take to heart before taking the

leap beyond their cloistered walls. The most important? That explaining to users what they're getting into may save them a lot of time and trouble . . . and a good deal of embarrassment.

But AOL is not the only service with Net-related troubles. Prodigy opened a local Internet bulletin board so its users could discuss the global computer network. But somewhere along the line a signal got crossed, and users thought the bulletin board was the Internet. Messages to the tune of "Hi, I'm in Nebraska. Is anyone out there?" propagated the board, as more savvy participants tried to explain—with limited success—what was going on. So Internet citizens, fresh from dealing with 650,000 spanking new AOL users, dread the impending flood from Prodigy's and CompuServe's four and a half million total subscribers.

America Online: Act II

Despite some problems with quirky Usenet software (it posted some users' messages up to a dozen times) and untrained users, America Online has weathered the storm, and now is ready for the next step. AOL now offers a Gopher client and limited access to some WAIS databases. FTP and telnet services also are planned, although no date has been set, according to managing editor Kathy Ryan. "We've been driven by what our customers ask for," she said.

However, AOL's Gopher and WAIS services won't look familiar to veterans of the Internet, and not just because of the graphical look. The two applications have been combined under a single interface: a Gopher-like series of menus that present either text files or other menus. In addition, AOL is limiting the Gopher

information it will make available, and users will only be able to easily access Gopher services that AOL's editors have chosen. Veronica searches also are limited: You cannot choose the server to search. And WAIS searches will not return the relevancy information the system is known for. Thus, AOL's combined Gopher/WAIS offering is a watered-down version of both applications that seems to promise more than it delivers—a charge AOL has faced before.

AOL has been courting partners to increase the services it provides. An alliance with publisher Simon and Schuster, for instance, will allow AOL to offer College Online to provide e-mail and other resources for students and educators as an alternative to the Internet.

Another service being tested is a TCP/IP connection that will enable users to access AOL through an office LAN or via a SLIP or PPP Internet connection. The beta software is only available for

Illustration by James Yang



B-665

Macintosh users, and is located at AOL's anonymous FTP site, ftp.aol.com, in the /mac directory. The file is called TCP-for-Mac-AOL-2.1.sea; a README file provides instructions. (AOL's standard Macintosh and Windows software is also available at that site.)

On the Usenet front, complaints about AOL users continue to mount. According to Ryan, "(the reaction) wasn't surprising. When we came onto the Internet, I believe we came on as the single largest site, and we did have some members who didn't understand netiquette." But that's changed now, she says. "I think AOL has done more to educate its users than anyone else." For instance, the service now has unofficial "Net buddies"—Internet-savvy users who monitor Usenet and inform newcomers when they violate netiquette.

America Online's users are not entirely to blame, according to some. AOL software makes it difficult to reply by e-mail (users must post personal follow-ups instead) and users cannot include original message text in their replies. AOL users also must pay \$3.50 per hour to use News because there is no off-line newsreader. That means, as one user puts it, that they must pay to think; the more they think about what they write, the more it costs.

In late August, thanks to an aggressive campaign of giving out free trial

accounts, AOL claimed to have reached the one million subscriber mark, making it slightly less than half the size of CompuServe or Prodigy.

CompuServe: Slow and Steady May Win the Race

While AOL was opening its doors to let its users out, CompuServe's first step was to let its users in, by allowing users to telnet to their CompuServe accounts from the Internet. CompuServe can do this for one simple reason: Its service is text-based (although graphical front ends are available) and thus well-suited for use through one of the Internet's typical terminals.

Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time, but it charges for e-mail usage beyond a certain volume: After about 60 free three-page messages each month, users must pay approximately 5¢ for each 1,500 characters they send or receive.

CompuServe recently gave its users access to Usenet News, and provided plenty of warning signs along the way ("This information originates *outside* of CompuServe, and CompuServe therefore claims no responsibility for the content."). However, CompuServe's Usenet software suffers from some of the same problems as America Online's. Most obvious is the inability to automatically insert text from an original message into a follow-up message.

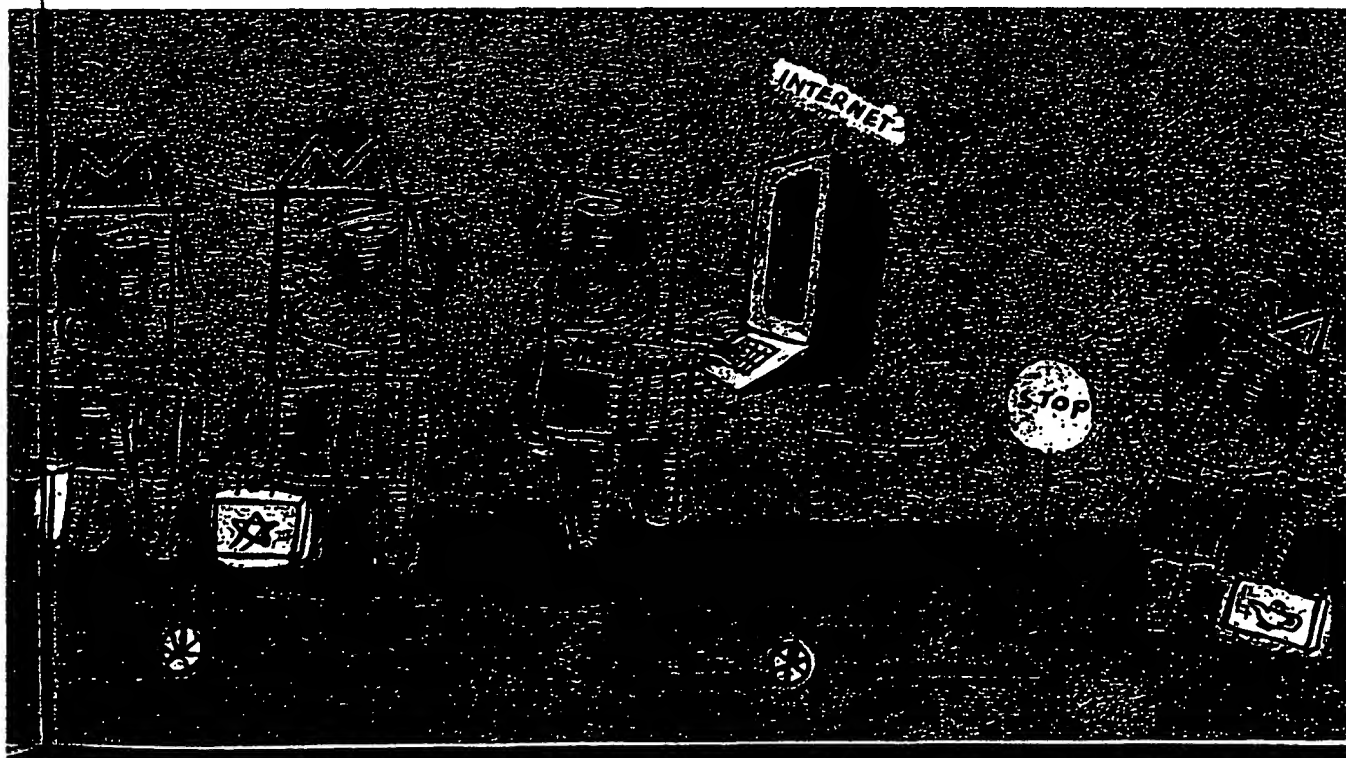
CompuServe's Usenet software betters AOL's in one way: When you choose to reply to a message, the default settings send the reply through e-mail only, and not into the newsgroup—a feature many Usenet residents will appreciate.

While seeking to protect the Internet from breaches of netiquette by its members, CompuServe also is trying to shield its members from any perceived offensive aspects of the Internet. Scroll through the lists of available newsgroups on CompuServe, for example, and alt.sex is nowhere to be found. However, you can subscribe to the newsgroup by typing in the name yourself.

Choosing a group from one of CompuServe's lists is no piece of cake. You must slowly scroll through hundreds of listings in alphabetical order. For example, to find alt.tv.something, you must make your way through everything from alt.1d to alt.travel.roadtrip.

And if you happen to subscribe to one of the ".binaries" newsgroups, where people post encoded pictures, sounds, or movies, the newsreader software offers no means to decode them. America Online left out this function as well, much to the chagrin of the people who frequented those groups.

According to Dave Bezaire, CompuServe's senior product manager, the service is planning several other new Inter-



B-6-66

"Our intention is to be very clear with our members about what the Internet is—to make them aware that they're leaving this world."

net-related features, but does not want to release too many new offerings at one time. "The tremendous press coverage of the Internet has raised expectations sky high," Bezaire says, "so we want to avoid overhyping it in our community before it's available."

Bezaire would not comment on what else might lie ahead for CompuServe. "Our philosophy is to bring Internet services forward on an incremental basis—manage the process, manage the service, and educate the community," he said. "As we release additional Internet products and services, I want it to be a satisfying experience for all our members."

GEInet: Holding Its Ground

GEInet has been offering an e-mail gateway to and from the Internet for several years, but nothing more. That's the way it will likely stay "for the foreseeable future," according to Vivian Kelly, media relations specialist.

As on AOL, e-mail on GEInet is free and unlimited. And GEInet users are not entirely cut off from the Net: It offers an Internet RoundTable, in which sysops will gladly search for and retrieve files if requested by users, and will even scan files for viruses. But Kelly says that GEInet has been reluctant to offer full Internet access because the service is part of General Electric Information Services (GEIS) and its corporate customers have concerns about security.

Prodigy: In Time, All Things

With more than two million individual users, Prodigy is the world's largest on-line service, and it is preparing to open its door to the Internet—albeit slowly.

Prodigy already has an e-mail gateway to the Internet, although users must acquire separate software to send and receive messages. But that's going to change,

according to product manager Bill Day, who said that basic Internet e-mail capabilities would soon be integrated into the software. "We're reorganizing Prodigy to put more focus on the Internet," Day explained. "We're very excited about it."

The next phase of Prodigy's Internet access will be some refinements to the e-mail software, and access to Usenet News. And Day said the service had given a lot of thought to how Prodigy users would react to the Internet, and vice versa. "We've been thinking about how we should educate our people on how the newsgroups operate. We need to cover How do you behave, and What do you not do?"

Prodigy will try to lessen the force of the impact—if not the scope—in several ways. First, it will cache Usenet News on its own server to reduce the impact on the Internet. Second, unlike America Online, Prodigy won't be making it easy to reach Usenet. "Our approach is that you have to be interested and knowledgeable enough to reach these services," Day said. "The people must be communications savvy. It's not point and click." Those measures, coupled with a "strong education effort," he said, should mean that Prodigy users would know how to behave when they reached Usenet.

Prodigy is also planning to offer services that don't appear on the Internet, including an alliance with CBS to offer interactive entertainment features including show previews.

In terms of the Internet, Day said that Prodigy eventually would offer some sort of Copher-like access to information on the Internet, including government resources, sound files, and other data that might interest users. But the information would be far from comprehensive, and would be a selection of some of the more popular files. "We would act as a mediator between the Internet and our members," Day said.

"Our intention is to be very clear with our members about what the Internet is, and to be honest about the world out there—to make them aware that they're

leaving this world," Day explained. "We're thinking hard about what we've learned about content and customer service by running our own little on-line service, and that will affect how we pick content and how we present it to people."

Down the Road

The major on-line services are not rushing to provide full Internet access because doing so might well lead to their demise. After all, no matter how you access the Internet—from school, a local provider, or a commercial service—the content is the same. And as better, user-friendly Internet interfaces like Mosaic and Eudora are developed, AOL, CompuServe, and Prodigy will find it harder to differentiate themselves from the Internet.

How can the on-line services compete in this evolving landscape? First, they must keep a step ahead of the Cellos and Trumpets, and must design interfaces that any junior high school student can use. They also must develop a friendly help staff to assist users in learning to cruise in cyberspace. Users only will be willing to pay more if they're getting something extra, such as 24-hour support.

The on-line services also will have to stop charging hourly fees for Internet services. Anyone who follows more than five or six newsgroups knows that on-line time can add up, so why pay \$3-\$10 per hour when you can find a local Internet provider that charges a flat rate?

Another way on-line services could compete with the Internet would be to filter it. Users could be guaranteed an environment that's friendlier, if not as open—a homogenized, pasteurized, porn-free, flame-free Internet.

Now is not the time to place bets on which of the on-line services will prosper or survive. The landscape is changing every day, and no one can venture more than a guess as to how the market will shake out over the next few years.

Andrew Kantor (ak@mecklermedia.com) is associate editor of Internet World.

B-6-67

On Haiti, Shooting From the Lip The Washington Post October 6, 1994, Thu

19 of 21 DOCUMENTS

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October 6, 1994, Thursday, Final Edition

SECTION: STYLE; PAGE B7; CYBERSURFING

LENGTH: 939 words

HEADLINE: On Haiti, Shooting From the Lip

SERIES: Occasional

BODY: "

Pit Stops

For those visiting London who are in need of a quick daytime fix, "Cyberia" -- a "cyberspace cafe" -- has opened recently in central London offering coffee, cakes and connection to the Internet. **Connect charge: 1.95 British pounds per half-hour.** The address is 39 Whitfield St., W1 (near to Goodge Street underground station on Tottenham Court Road).

Jeremy Robinson

robinson@well.com

We also hear that at the Infomart in Dallas, off the Stemmons Freeway west of downtown, the newly opened High Tech Cafe has a computer maitre d' that asks diners in its machine voice, "Nonsmoking, smoking, or modem-ready?" Sure enough, not only is there a phone jack at the table, but a fax machine is ready nearby.

Found something intriguing, improbable, insane or especially useful on the Net? Tip Karen Mason Marrero (kmarrero@aol.com) or Joel Garreau (garreau@well.com).

GRAPHIC: ILLUSTRATION, MARC ROSENTHAL FOR TWP

LOAD-DATE: October 6, 1994

- Attachment H

B-6-L8

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Defendant.

) No. 98-PT-596-E

B-6-69

STIPULATIONS

It is hereby stipulated and agreed by and between the parties herein that presentment to the attorneys of record of a copy of this deposition shall be considered submission to the witness for his signature within the meaning of Federal Rules of Civil Procedure; but shall in no way be considered as a waiver of the witness' signature, and is to be signed at any time before the time of trial; and if not signed by time of trial, may be used with the same force and effect as if signed.

INDEX

WITNESS:	PAGE
DANIEL J. TOUGHEY	
Examination by Mr. Polasek	4
Examination by Mr. Stitt	83
Further Examination by Mr. Polasek	98
SIGNATURE:	107
CERTIFICATE:	108

INDEX OF EXHIBITS

NO.	DESCRIPTION	PAGE
1	Notice	5
2	Answer to Interrogatory No. 1	17
3	Network Topograph Diagram	20
4	John Murphy Affidavit	25



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B-670

INDEX OF EXHIBITS (CONT'D.)

	NO.	DESCRIPTION	PAGE
1			
2			
3	5	Videotape "TouchFax America"	40
4	6	1st brochure of product	54
5	7	TF700 TouchNet terminal brochure	55
6	8	TF700 brochure	56
7	9	Not identified	-
8	10	Ad for Telephony Magazine	57
9	11	TF450 brochure	58
10	12	Interactive World article, 10/92	59
11	13	Multimedia Interactive Terminal Loc. ducmt	59
12	14	KC Business Journal article, reprint	60
13	15	1992 brochure	60
14	16	Copy of Patent # 4359631	63
15	17	Info from VPR Creative Group	66
16	18	Invoice from Spinnaker	67
17	19	Invoice to Prodigy	68
18	20	Printout of source code/transaction log	69
19	21	Documents re: TON Services, Inc.	70
20	22	Documents re: Mediatel	74
21	23	Fax to D. Vermeire, 11/92	77
22	24	Document to D. Vermeire, 9/92	79
23	25	License Agreement	80
24		(Exhibits were retained by Mr. Polasek)	
25			



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B-6-71

1 wide web sites they would like to go to. And I
2 believe now America On-Line has a world wide web
3 site and a dedicated interface through a dial-up
4 system, so they have two different paths, if you
5 will. And so I guess ours is the latter, we will
6 provide access to the internet and let somebody
7 decide where they want to go.

8 Q Okay. Let's back up. I was asking you questions
9 that relate to a user of the terminal being billed
10 for access to the internet through the use of a
11 commercial on-line service provider such as
12 Prodigy or AOL, CompuServe.

13 A Yeah.

14 Q And you said that TouchNet does not currently use
15 or have a terminal that does that.

16 A Correct.

17 Q But you did indicate they have plans to do so?

18 A Correct.

19 Q Okay.

20 A But not necessarily through America On-Line as a
21 internet service provider.

22 Q Okay. Then how is it that --

23 A You will go through a variety of different
24 internet service providers so just -- Earth Link,
25 for example, they provide -- let's say they



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B-672

1 provide internet dial tone basically, right?

2 Q Okay.

3 A And our systems then will -- as if you are the

4 user, will ask you where you want to go.

5 Q Okay.

6 A Or highlight different destination points on the

7 world wide web.

8 Q But if I am the user --

9 A Uh-huh.

10 Q -- I am going to have to put my credit card in

11 there and pay for that access, correct?

12 A That is the plan.

13 Q Okay. And what I am trying to get at is, do we

14 have the terminal and the software set up to do

15 this? Do we expect to roll out a terminal this

16 year, next year --

17 A Yes.

18 Q -- or when?

19 A Very soon.

20 Q At the present time, TouchNet has not rolled out

21 one of those terminals though?

22 A Not that charges for the service.

23 Q Okay. When you say very soon, can you be more

24 specific?

25 A Sometime in the next 30 days. But, again, it is



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B-673

1 Q That would be on that particular machine?
2 A It would be stored, yes, on that particular
3 machine.
4 Q If they went to a different machine in another
5 part of the airport or something, their card would
6 go through the same validation procedure?
7 A Correct, right, correct.
8 Q This exhibit, Exhibit 3, also references an
9 on-line interactive database. And the second
10 bullet point below that, it says, Public - Access
11 to CompuServe, Prodigy.
12 A Correct.
13 Q This goes back to our earlier discussion, but the
14 terminal that this document attempts to describe
15 does not disclose the use of the credit card to
16 pay for access to CompuServe or Prodigy, correct?
17 A This document doesn't specifically do that.
18 Q And at that time, TouchNet was not -- the terminal
19 was not set up to charge the user for access to
20 CompuServe or Prodigy; is that accurate?
21 A Well, at that time, the terminal didn't even have ¹⁹⁹¹
22 CompuServe or Prodigy on it. At that time, these
23 were -- these are ideas of what you could do
24 because, again, our main business was selling to
25 third parties our system.



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B-6-74

1 internet pop up there. Did you notice that?

2 A No, I didn't.

3 Q Let's see if we can go back. I'm not able to get
4 it stopped there. See if I can try it again.

5 MR. STITT: Let me give it a try.

6 THE WITNESS: I think I did see that.

7 You are in front of it now.

8 (Whereupon, the videotape, Exhibit 5,
9 was rewound to counter 34.)

10 Q (By Mr. Polasek) Now that we have been able to
11 stop the tape, it shows a rectangular gold block
12 labeled internet. I think it is right at -- I
13 thought it was the 36 second mark. It may be 34.

14 MR. STITT: It appears to be 34.

15 Q (By Mr. Polasek) Did that provide for access to
16 the internet? If the user was to touch that icon,
17 I guess is what you would call it, that portion of
18 the TouchNet screen, does that enable a user to
19 gain internet access or do you know?

20 A Not at that time, no. That was like MCI mail
21 above it. Those are possible uses for the system.
22 And so the reason we built this video was to sell
23 our systems. And so, again, the vision of
24 TouchFax, TouchNet was its multipurpose
25 information communication terminal that, depending



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0-675

1 other types of information databases such as USA
2 Today sport center for on-line sports information.

3 And then the last bullet is BBS, which is for
4 bulletin board service applications, any kind of
5 bulletin board, which was really, you know, a
6 predecessor in many respects, you know, to the
7 world wide web. Different types of information
8 bulletin boards that our system could access.

9 MR. STITT: I think we can go on unless
10 you have redirect.

11 FURTHER EXAMINATION

12 BY MR. POLASEK:

13 Q Yeah, I have some questions starting with what was
14 marked as Exhibit No. 3. Let me start over. With
15 regard to Exhibit 3, isn't it accurate that access
16 to Prodigy and CompuServe was not available at the
17 time that this document was prepared on the
18 TouchNet terminal?

19 A That's correct.

20 Q Okay. So at the time that this document was
21 prepared, you couldn't access Prodigy or
22 CompuServe from a TouchNet terminal?

23 A In 1991, that's correct.

24 Q And this document -- again I think we have been
25 through this -- this document itself does not



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Request for Continued Examination (RCE) Transmittal

Address to:
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P.O. Box 1450
Alexandria, VA 22313-1450



Application Number Filing Date	09/134,831 (Reissue) August 17, 1998
First Named Inventor	Richard R Mettke
Art Unit	2743
Examiner Name	Stella Woo
Attorney Docket Number	N14

1. **Submission required under 37 CFR 1.114** Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

a. ☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
ii. ☐ Other _____

c. ☒ Enclosed

☒ Amendment/Reply
Affidavit(s)/ Declaration(s)

☐ Information Disclosure Statement (IDS)

iv. ☐ Other _____

3. Miscellaneous

a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)
b. ☐ Other _____

Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to

a. ☐ Deposit Account No. _____ I have enclosed a duplicate copy of this sheet.

☐ RCE fee required under 37 CFR 1.17(e)

ii. ☐ Extension of time fee (37 CFR 1.138 and 1.17)

iii. ☐ Other _____

b. ☐ Check in the amount of \$ _____ enclosed

c. ☒ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature Richard R Mettke
Name (Print/Type) Richard R Mettke

Date 10-26-06 395.00 OP
Registration No. _____

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and

Signature Richard R Mettke
Name (Print/Type) Richard R Mettke

Date 10-25-06

B-6-78

Appendix C- Related Proceedings

Appendix

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

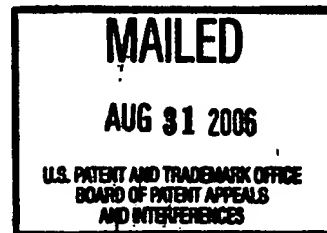
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD P. METTKE

Appeal No. 2006-0625
Reissue Application 09/134,831

ON BRIEF



Before BARRETT, LEE, and MEDLEY, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 6-9. Claims 1-5 have been canceled.

We affirm, but also enter new grounds of rejection.

REISSUE and PROTESTS

This application was filed on August 17, 1998, for reissue of U.S. Patent No. 5,602,905 (the '905 patent), entitled "On-Line Communication Terminal/Apparatus," by inventor Richard P. Mettke, issued February 11, 1997, based on Application 08/376,247, filed January 23, 1995. The reissue declaration by inventor/Patent Owner Richard Mettke states that he believes the patent to be wholly or partly inoperative or invalid by reason of claiming less than he had a right to claim, in particular, because he removed the word "Internet" from the specification and the claims without submitting additional claims directed to an online communications terminal for accessing the Internet.

Protests were filed under 37 CFR § 1.291(a) by: (1) TouchNet Information Systems, Inc. on November 4, 1998; (2) North Communications, Inc. on March 31, 1999; and (3) Griffes Consulting, SA on August 11, 1999.

LITIGATION

Mettke v. Hewlett Packard, Co. and North Communications, Inc., No. CV-97-TMP-3160-E (N.D. Ala. filed December 8, 1997), dismissed with prejudice by Order entered December 8, 1999.

Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed March 16, 1998), dismissed with prejudice by Order entered September 21, 1998.

BACKGROUND

The invention relates to a pay-as-you-use public terminal for accessing the Internet. The original application, as filed, disclosed a public terminal for accessing online service providers (such as Prodigy and CompuServe) and Internet providers, but all but three references to the Internet were canceled. The stated purpose of this reissue is to correct Patent Owner's error in deleting references to the Internet and claims to a pay-as-you-use terminal for accessing the Internet. The background of the invention in Application 08/376,247, as originally filed, describes (page 2):

In the past few years there has been a remarkable growth in the use of commercial on-line service providers (I.E. PRODIGY, COMPUSERVE, AMERICAN ON-LINE, and DELPHI), Internet providers and use of FAX machines. The use of the above listed services are normally conducted in the home or office.

Many businesses use E-mail (through an on-line service or the Internet) to conduct day to day operations In addition, businesses constantly draw from the wealth of data bases of information available from the on-line services and the Internet.

Commercial and Internet on-line members also access the services for personal and leisure activities These services are generally accessed from fixed site locations at home or in the office. Although, portable terminals (lap top computers) with modems are available; they are often cumbersome and are not user friendly for a travelling business people or other users of on-line services or the Internet on the road.

The current pay as you use FAX machine requires users to have a hard copy document to send; and virtually none are able to receive in a user friendly configuration. In many situations, it is impractical for a user to have a hard copy document in hand to send. This invention will allow a user to create a document on screen and FAX it out, as well as provide for a header and print out a copy of the message sent. A telephone will also be located in the terminal cubicle to instruct the sender to transmit a FAX to the terminal location.

An added feature of the terminal would allow for minor word processing at its terminal. This would be a highly desirable service for business people/individuals on the go that would require its service. . . .

After listing prior art patents, the background concludes

(page 4):

Accordingly, there is no one device/apparatus that allows a user, to access, on a pay as use basis, such an array of one stop applications. The terminals would be located in such diverse locations as airports, hotels, business centers, libraries, hospitals, shopping malls and other locations as appropriate.

The object and advantages of the invention are described as follows (page 4):

Accordingly, besides the objects and advantages of this device/apparatus described previously in my patent, several objects and advantages are (some restated):

(a) Users can conveniently access commercial on-line services and the Internet at other locations other than from their fixed terminal at an office or home.

(b) Users can create, send and receive FAX's from the terminal.

(c) Users can conduct word processing operations and send the file via e-mail to another fixed terminal.

(d) Users can receive a hard copy document from a laser printer of any activity that they conduct at the terminal.

(e) Users will pay for the use of the terminal using a credit card swipe apparatus. The user will be charged for use of the terminal, telephone line use charges and additional charges by the commercial on-line service or Internet provider.

(f) Commercial on-line services and Internet providers will benefit greatly by the additional exposure/access of their services.

(g) Users will have the convenience of having easy access to the services provided by the terminal at a reasonable price; negating the need for frequent travelers to unnecessarily carry around a cumbersome laptop terminal with accessories for FAX'ing or conducting other on-line activities.

The apparatus is a "[t]erminal device which is comprised of the monitor, keyboard w/mouse, central processing unit w/internal modem (14.4 -28 BPS), integrating software, laser printer, credit

card swiping device, telephone and telephone lines" ('905 patent, col. 2, lines 42-46), as represented by block 2 in Fig. 1.

Figure 2, as originally filed, is reproduced below.

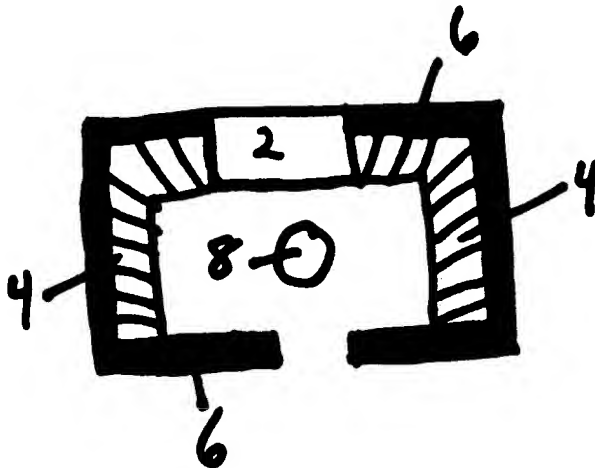


Figure 2 shows a top view of a cubicle surrounded by a wall 6 and having a desk top 4 holding the terminal 2 with a round stool 8 in front of the terminal. Patent Owner filed a substitute Fig. 2 showing the terminal in the form of a housing containing the terminal components, which the Examiner accepted and which became Fig. 2 of the '905 patent. The same Examiner in this application now has objected to Fig. 2 as new matter and has required that it be restored to the original figure (Final Rejection, p. 2). Patent Owner responded (Amendment of April 24, 2002): "It would be obvious to some one skilled in the art that the words and meanings of 'terminal' and 'housing' are synonymous as portrayed

in the original disclosure. In, [sic] addition the prior art provided, demonstrates this contention. Where else would the components listed in the specification be housed?" (Emphasis omitted.) The Board has no jurisdiction to review "objections" to the disclosure under 35 U.S.C. § 132; the Board's jurisdiction is limited to those matters involving the rejection of claims. In re Hengehold, 440 F.2d 1395, 1404, 169 USPQ 473, 480 (CCPA 1971). Nevertheless, since Patent Owner is pro se, we note that the Examiner is correct because the original Fig. 2, as filed, did not show the components arranged in a unitary housing as in the substitute Fig. 2. The fact that references cited in the patent disclose components in a housing does not disclose that Patent Owner's components are in a housing. A "terminal device" does not imply a unitary housing, the various components of CPU, display, keyboard, printer, etc. can be separate components on a desk as with most home computers. The patent law is very strict about new matter in the specification and claims. A claim to a housing would properly be rejected for lack of written description since what would have been obvious is not the test for written description. See Lockwood v. American Airlines Inc., 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1968 (Fed. Cir. 1997) ("One shows that one is 'in possession' of the invention by describing the invention, with all of its claimed limitations, not that

which makes it obvious."). Patent Owner has properly canceled references to a "housing" in claim 6.

Claims 6-9 are reproduced below.

6. A public on-line, pay-as-you-use communications terminal comprising:

- a central processing unit (CPU);
- a telephone access node;
- an internal modem coupled to the CPU and telephone access node;
- a video display monitor coupled to the CPU;
- a keyboard for providing user interface coupled to the CPU;
- a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;
- means for accessing the Internet and allow for user interaction;
- software installed into the CPU to allow interface with the Internet and credit card service centers; and
- a printer coupled to the CPU.

7. The terminal of claim 6, wherein the means for accessing includes a keyboard which communicates with and controls a microprocessor.

8. The terminal in accordance with claim 6 also including program means for causing said printer to print a receipt or any other document available from a commercial on-line service.

9. The terminal of claim 6, wherein the terminal comprises a CPU, monitor, credit card reader swipe device, internal modem and printer.

THE REFERENCES

The examiner relies on the following references:

Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).

VISION . . . POWER . . . VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).

Rawn Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.) (hereinafter "Shah").

The World Wide Web Conferences, 1994-1995 Kiosk Papers, <http://www.visi.com/~keefner/pdfs/twwwc.htm>, pp. 1-3 (of 113) (hereinafter the "1994-1995 Kiosk Papers") (not prior art).

THE REJECTIONS

We refer to the Final Rejection (pages referred to as "FR__") entered March 12, 2002, and the Examiner's Answer (pages referred to as "EA__") entered August 17, 2005, for a statement of the Examiner's rejection, and to the Revised Appeal Brief (pages referred to as "Br__") filed March 20, 2005, for a statement of Patent Owner's arguments thereagainst.

Dependent claim 7 stands rejected under 35 U.S.C. § 112, first paragraph, based on lack of written description for the limitations that a keyboard "controls a microprocessor" and for a "microprocessor" in addition to the claimed CPU.

Claims 6-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Exhibit E, Exhibit F, and Shah. The 1994-1995 Kiosk Papers article is cited to show that Shah was publicly accessible at the time of filing and, therefore, a prior art "printed publication." The Examiner finds that one difference between the subject matter of claim 6 and Exhibit E is that Exhibit E does not expressly disclose software to allow interaction with credit card centers (FR6). The Examiner finds that Exhibit F teaches the use of software to carry out communication functions and concludes that it would have been obvious to use software "within the TouchFax terminal of Exhibit E to carry out its communication functions with the credit card centers in order to authorize payments made via the credit card reader" (FR6). The Examiner finds that the difference between the subject matter of claim 6 and the combination of Exhibits E and F is that Exhibits E and F do not specify accessing and interfacing with the Internet (FR6). The Examiner finds that Shah teaches the desirability of providing access to the Internet in a kiosk-based information system to provide users with the many services on the Internet and concludes that "[i]t would have been obvious to an artisan of ordinary skill to incorporate such means for accessing and software for interfacing with the Internet in a kiosk information

system, as taught by the Shah article, within the combination of Exhibits E and F in order to provide users with access to the many services available on the Internet" (FR7).

DISCUSSION

Attachments

For convenience, a copy of the references and other documents mentioned are attached to this opinion, except for the videotape Exhibit C.

Written description

The written description requirement of 35 U.S.C. § 112, first paragraph, is used to reject when a claim is added or amended to recite a limitation without support in the original disclosure. See In re Rasmussen, 650 F.2d 1212, 1214-15, 211 USPQ 323, 326 (CCPA 1981). The specification must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. See Vas-Cath Inc. v. Mehurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991). Satisfaction of the written description requirement does not require the description to be in ipso verbis (in the identical words) antecedence in the originally filed application. See In re Lukach, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971).

Initially, it is noted that Patent Owner proposed canceling claim 7 (in response to the § 112 rejection) and claim 9 (in response to an objection that it was in improper dependent form for failing to further limit the subject matter of claim 6) by the amendment after final rejection received April 24, 2002, but the Examiner denied entry of the amendment.

The Examiner finds that the added limitation, "a keyboard which communicates with and controls a microprocessor," is not supported by the original disclosure because it makes no mention of the keyboard controlling a microprocessor (FR4).

Patent Owner refers (Br6-7) to the description of U.S. Patent 4,374,381 in the list of prior art in the '905 patent, which states "[a] touch terminal which communicates and controls a microprocessor" ('905 patent, col. 1, lines 43-44).

The Examiner responds that the original disclosure does not describe the keyboard controlling a microprocessor, because "[c]ommunication and control are two different functions" (EA7).

We will not sustain this reason for the rejection. Although a description of prior art is not a written description of the invention, the original disclosure does describe a keyboard connected to the CPU. One of ordinary skill in the art would find it inherent that a keyboard controls a CPU by causing it to

perform functions entered by the keystrokes. No new function is introduced.

The Examiner also finds that there is no provision in the original disclosure for a "microprocessor" in addition to the CPU already recited in claim 6.

Patent Owner does not respond to this reason.

We agree with the examiner that the disclosure does not discuss both a CPU and a microprocessor. Nor is it clear that the "microprocessor" and the "CPU" are intended to refer to the same thing. Because of the use of the indefinite article "a" in "a keyboard," it is not even clear that the keyboard is the keyboard

in claim 6.¹ This appears to be a misuse of terminology by Patent Owner, but, nevertheless, the limitation, as presented, is not supported.

The written description rejection of claim 7 is sustained.

¹ Since Patent Owner is pro se, we explain that, as a matter of claim draftsmanship, the first time an element is introduced it is referred to using the indefinite article "a" or "an," and when later referring back to a previously mentioned element, it is referred to using a definite article, such as "the" or "said," so that readers know that it refers to the previous element. When an element is introduced the first time using a definite article, the claim is usually rejected under 35 U.S.C. § 112, second paragraph, as indefinite for "lack of antecedent basis."

The references are prior art "printed publications"

Patent owner argues that Exhibit E, Exhibit F and Shah are not prior art.

Whether a reference is prior art under 35 U.S.C. § 102 is a question of law. See Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1568, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). Whether a given reference is a "printed publication" depends on whether it was "publicly accessible" during the prior period.

See In re Wyer, 655 F.2d 221, 226, 210 USPQ 790, 794 (CCPA 1981).

A given reference is "publicly accessible"

upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation.

Id. (quoting I.C.E. Corp. v. Armco Steel Corp., 250 F. Supp. 738, 743 (S.D.N.Y. 1966)). The requirement of public accessibility can be satisfied under a variety of conditions, including when there has been a meaningful distribution, indexing, or display of the material to the public interested in the art. See generally In re Klopfenstein, 380 F.3d 1345, 72 USPQ2d 1117 (Fed. Cir. 2004).

The original purpose for the "printed" requirement, that printing increases the probability that a reference will be

available to the public, has largely been made redundant by changes in document duplication, data storage, and data-retrieval systems. See Wyer, 655 F.2d at 226, 210 USPQ at 794. "Printed publication" is now addressed as a unitary concept where "the question to be examined under § 102(b) is the accessibility to at least the pertinent part of the public, of a perceptible description of the invention, in whatever form it may have been recorded." Id. "[A] printed document may qualify as a 'publication' under 35 U.S.C. § 102(b), notwithstanding that accessibility thereto is restricted to a 'part of the public,' so long as accessibility is sufficient 'to raise a presumption that the public concerned with the art would know of [the invention].'" In re Bayer, 568 F.2d 1357, 1361, 196 USPQ 670, 674 (CCPA 1978).

A "printed publication" need not actually be seen by anyone; if the document was available and accessible so that a hypothetical person of ordinary skill in the art exercising reasonable diligence could have found it. The document is prior art because of its constructive placement into the public domain. Many of the cases on "printed publication" deal with the question of accessibility to the document by a hypothetical person of ordinary skill; that is, whether there is constructive knowledge by the public. See Bayer (unshelved and uncataloged master's

thesis accessible only to graduate committee prior to critical date not sufficiently accessible to public to constitute a "publication"); Wyer (application microfilmed and diazo copies deposited at five sub-offices of Australian Patent Office constitutes printed publication); In re Hall, 781 F.2d 897, 228 USPQ 453 (Fed. Cir. 1986) (single cataloged doctoral thesis deposited in a library in Germany prior to the critical date was a printed publication as of that date); In re Cronyn, 890 F.2d 1158, 13 USPQ2d 1070 (Fed. Cir. 1989) (undergraduate thesis deposited in college library open to the public but neither cataloged nor indexed in meaningful way is not a printed publication because it is not accessible to the public); Bruckelmeyer v. Ground Heaters, Inc., 445 F.3d 1374, 78 USPQ2d 1684 (Fed. Cir. 2006) (two canceled drawings remaining in Canadian patent's file wrapper were printed publications because a person of ordinary skill in the art interested in the subject matter and exercising reasonable diligence would be able to locate them).

Exhibit E

Patent Owner argues that Exhibit E appears on its face to be an article in the October 1992 journal entitled "Interactive World," but that he "has been unable to determine where to access 'Interactive World,' or what individuals had access to Exhibit E

at any time prior to the filing date of this application, i.e., January 23, 1995" (Br10). Patent owner argues that a "representative of the appellant searched the catalogs of Rice University and the University of Houston, two of the largest library collections in the fourth largest city in the United States and was unable to locate any journal entitled 'Interactive World'" (Br12) and "submits that Exhibit E is not prior art that can be cited against the claims of this application" (Br12).

The Examiner responds that Exhibit E is an article from the magazine "Interactive World," which is clearly a printed publication (EA7).

The Examiner does not address Patent Owner's arguments. On its face, Exhibit E is a printed magazine article, which is presumed to be distributed and publicly accessible. Nothing about Exhibit E suggests that it is not what it seems or that it was somehow fabricated for purposes of litigation. Patent Owner's statement that his representative was unable to find "Interactive World" in the catalogs of Rice University and the University of Houston is not in the form of an affidavit or declaration, but, in any case, looking in only two libraries is hardly evidence of reasonable diligence. The magazine is clearly a specialized publication that would not be expected to appear in every library. Several years worth of the magazine are in the

U.S. Patent and Trademark Office's (USPTO's) Scientific and Technical Information Center (STIC), although not for the year 1992. An article from the November/December issue of "Internet World" is applied in a new ground of rejection and includes the publication information page. Exhibit E is a prior art "printed publication."

Exhibit F

Patent Owner argues that Exhibit F is not prior art because (Br15):

No evidence has been provided by any of the Protestors or the Examiner as to where Exhibit F can be accessed by the public, or on what date Exhibit F became accessible to the public. Exhibit F may not have been disseminated to anyone outside of Protestor's organization at any time prior to January 23, 1995.

The Examiner responds that Exhibit F is one of a series of product brochures distributed without restriction and was available to the public in March/April of 1991, as evidenced by pages 54-56 of the Deposition of Daniel J. Toughey, President of TouchFax, in Mettke v. TouchNet, No. 98-PT-596-E (EA8).

Patent Owner ignores the evidence of Mr. Toughey's deposition. Exhibit 7 in Mr. Toughey's deposition corresponds to the present Exhibit F. Mr. Toughey testifies that the brochures for Exhibit 7 were distributed and made publicly available in March/April of 1991 (Toughey deposition, p. 55, lines 15-23).

Patent Owner's attorney, who deposed Mr. Toughey, could have asked further questions if there was any doubt as to the distribution of this document. As it stands, there is testimony under oath that the copyright date of 1991 for Exhibit 7 (now Exhibit F) is when the document became publicly accessible and Patent Owner had fair opportunity to challenge this date. To the extent Patent Owner somehow thinks that Exhibit E should be presently cataloged and accessible, we note cataloging in a library is only one of many ways to qualify as a printed publication. Exhibit F was accessible from, at least, TouchNet and, since it was distributed, it was accessible to the part of the public interested in such devices. Once something becomes a printed publication, it does not cease to be a printed publication just because it later may be hard to find a copy. Exhibit F is a prior art "printed publication."

Shah

Patent owner argues that the Shah article is not prior art because the Protestors and Examiner have not provided any evidence that it was accessible to a member of the public exercising reasonable diligence (Br16). It is argued that it appears that Exhibit I was only available on the World Wide Web and was not indexed or cataloged in any library or other location accessible to the public (Br16). It is argued that a person

would have to know the name of the author to have any chance of locating the article using a search engine on the World Wide Web, because any other key terms, such as kiosk and Internet, are too generic, and knowledge of the author of an article is rarely available to the searcher (Br16).

The Examiner responds that the Shah article is mentioned in the 1994-1995 Kiosk Papers document as a paper presented at one of the three World Wide Web conferences in May 1994, October 1994, and April 1995, and its date of April 30, 1994, is consistent with the conference in May 1994 (EA9).

We conclude that the Shah article has sufficient indicia of public dissemination and access to be a prior art publication or, at least, to shift the burden of production of evidence to Patent Owner to show that it is not. The Shah article is formatted and appears on its face to be a final paper prepared for the "World Wide Web Information Kiosks Special Interest Group" that was published, complete with author information and a list of references; it is not just a draft that one would not expect to be published. The Shah article is referred to in the 1994-1995 Kiosk Papers as having been presented at one of the World Wide Web conferences and there is no reason to doubt the truth of this statement by a disinterested third party. We agree with the Examiner that the April 30, 1994, date is consistent with the

First International Conference held May 25-27, 1994, but this is not expressly stated. Nevertheless, by process of elimination it must be one of the first two conferences held in 1994. While the 1993-1994 Kiosk Papers article can still be found on the World Wide Web, "<http://www.visi.com/~keefner/pdfs/twwwc.htm>," most links are expired except for "WWW Spring '95" to "The Third International World-Wide Web Conference," "http://www.igd.fhg.de/archive/1995_www95/." This 1995 Conference Web page has a list of papers and authors and the Shah article is not among them, so we conclude that it must have been presented at one of the two 1994 conferences. In addition, the Shah article was downloaded from a Web site, "<http://www.rtd.com/people/rawn/kiosk-paper.html>" (the same URL noted in the 1994-1995 Kiosk Papers), and an earlier 1994 Shah paper in the references also has a URL, which reasonably suggests that the Shah articles were both publicly available on the Internet as of the date on the article, although not downloaded until 2/3/99. Web pages on the Internet are "printed publications." Patent Owner's argument that Shah would have been impossible to locate on the Internet is mere speculation. There is sufficient indicia to indicate that the Shah paper was publicly accessible at one of the 1994 World Wide Web conferences and on the Internet to shift the burden to Patent Owner to further investigate. See In re Epstein, 32 F.3d 1559,

1570, 31 USPQ2d 1817, 1825 (Fed. Cir. 1994) (Plager, J., concurring) (It is unreasonable "to require the PTO examiners to do any investigation suggested by available information. Since more and more information is now available on computer databases, that could require a staff of investigators far in excess of the resources currently available to the PTO. At bottom, the issue in this case is who is to bear the cost of further investigation when further investigation is thought warranted. The solution agreed to by the panel, and with which I concur, is at least for now to allow the PTO to use its immediately available data sources to identify legitimate questions that need answering, and then to place upon the applicant the burden of finding those answers."). Shah is a prior art "printed publication."

Claim interpretation

It is noted that claims 6-9 do not require that the elements be in a housing.

The limitations of claim 6 that require interpretation are "pay-as-you-use" and "payment by a user for use of the terminal." Claim 6 recites, in relevant part:

6. A public on-line, pay-as-you-use communications terminal comprising:

. . . .

a credit card reader swipe device coupled to the CPU for accepting payment by a user for use of the terminal;

means for accessing the Internet and allow for user interaction;

software installed into the CPU to allow interface with the Internet and credit card service centers; and

a printer coupled to the CPU.

Patent owner argues that the references do not disclose charging users for terminal access (Br 17):

The Shah article does not disclose or suggest that a credit card swipe device should be employed to charge a user for use of the terminal. . . . Exhibits E and F were specifically directed to charging the user for use of the service, not for use of the terminal. Neither of these references contemplated the broader and more ingenious idea of allowing access to the Internet, and then charging the user for access to the terminal.

None of the references discloses or suggests charging users for terminal access. None of the references discloses or suggests the use of a credit card swipe device to access the Internet.

The Examiner responds that "claims 6-9 do not recite charging for terminal access" (EA9), but only "for use of the terminal." The Examiner states that "Exhibit E clearly teaches a credit card reader which accepts payment by a user for use of the terminal to carry out various services, e.g. facsimile communication, word processing, high-quality copying, fax mailbox service, electronic library access" (EA9).

We agree with the Examiner's interpretation that payment for services performed on the terminal is payment for use of the

terminal. The terms "pay-as-you-use" and "payment by a user for use of the terminal" are not defined in the claims or in the specification, as payment to get onto or access the terminal, and are broad enough to include payment for use of services conducted on the terminal. In claim 6, the "means for accessing the Internet" follows the limitation of accepting payment "for use of the terminal," and claim 6 does not expressly link payment for "use of the terminal" to "accessing the Internet." Payment for "use of the terminal" could be payment "for use of the terminal" to perform a different service, such as sending a facsimile, making a copy, printing a document on the claimed printer, etc.; i.e., claim 6 does not require payment for all uses of the terminal. The software for interfacing with the Internet and credit card service centers is for two different purposes and there is no express limitation of charging a credit card for access to the Internet. Nevertheless, to prevent controversy on claim interpretation, we interpret payment for "use of the terminal" to be payment for the service of accessing the Internet on the terminal.

Obviousness

Factual findings

Scope of the art

Patent Owner's disclosed field of endeavor appears to be best defined as pay-per-use public communication terminals, and the particular problem with which he was concerned in claim 6 was providing access to the Internet. Exhibits E and F relate to pay-for-use public communication terminals and are within the inventor's field of endeavor. Shah relates to providing Internet access in a public communications terminal and is in the field of public communications terminals and is at least pertinent to the problem of providing Internet access in a public terminal. There is no dispute that the references are within the scope of the prior art; i.e., that they are from analogous art. See In re Deminski, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986) (the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned); Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535, 218 USPQ 871, 876 (Fed. Cir. 1983) ("The scope of the prior art has been defined as that 'reasonably pertinent to the particular problem with which the inventor was involved'.").

Content of the references

Exhibit E discloses a free-standing pay-for-use TouchFax TF750 public communications terminal (kiosk) for locations such as airports, hotels, truck stops, and supermarkets (p. 48). Services include phone, fax, computer, word processing, copying, and information services. The TouchFax terminal has a microprocessor, a touch-screen monitor, a data port for modem and laptop connections, a full-size keyboard, and a laser printer (p. 49, left col.). "Payment for services is made using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping." (P. 49, left col.) The user can connect via a modem to the Official Airline Guide (OAG) database and receive a facsimile report (p. 49, right col.). Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49).

Exhibit F discloses a "TF700 Public Communications Terminal from TouchFax," in a stand-alone housing including a telephone, speaker, touch-screen monitor, a credit card reader for payment of services, a full-sized keyboard for "computer database access or word processing," an option panel, a flatbed scanner, a 386 CPU, and a laser printer. Services include "telephone, send or

receive a fax, photocopying, word processing and laser printing, and access to a growing number of information databases from Wall Street news to international sports scores." Exhibits E and F essentially describe the same terminal, the differences being that the TF750 had a sloped countertop instead of the flat countertop in the TF700, and the TF750 had the keyboard in the countertop instead of a motorized retractable keyboard in the TF700. See Deposition of Daniel Toughey, President of TouchFax, in Civil Action No. 98-PT-596-E, pp. 55-59 (Exhibit 7 in deposition corresponds to Exhibit F in TouchFax protest and this appeal, and Exhibit 12 in deposition corresponds to Exhibit E in TouchFax protest and this appeal).

Shah discloses a kiosk-based information system using the World Wide Web on the Internet as an interface (abstract). Shah discloses that the advantages of using the Web are its popularity, it is already a multimedia tool, the user will have access to the many services on the Internet, and it is an accepted standard as opposed to a proprietary system (pp. 1-2). The kiosk includes input, output, processing, and network connection hardware, and Web browser software (p. 2 under "The Access Interface"). Shah states that entities that might implement a kiosk-based information system include "Commercial Information Referral organizations who wish to provide a paid

service through such kiosks" (page 3). Shah states (page 5):
"Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server."

Differences

The Examiner finds that one difference between the subject matter of claim 6 and Exhibit E is that Exhibit E does not expressly disclose software to allow interaction with credit card centers (FR6).

The Examiner finds that difference between the subject matter of claim 6 and the combination of Exhibits E and F is that Exhibits E and F do not specify accessing and interfacing with the Internet (FR6).

Level of ordinary skill in the art

Although examiners seldom make an express finding as to the level of ordinary skill in the art, the level of ordinary skill in the art is evidenced by the references. See In re Oelrich, 579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("the PTO usually must evaluate both the scope and content of the prior art and the level of ordinary skill solely on the cold words of the literature"); In re GPAC Inc., 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995) (the Board did not err in adopting

the approach that the level of skill in the art was best determined by the references of record); Okajima v. Bourdeau, 261 F.3d 1350, 1355, 59 USPQ2d 1795, 1797 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown.'"). Skill in the art is presumed. See In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

Objective evidence of nonobviousness

No objective evidence of nonobviousness has been presented.

Motivation

The Examiner finds that the communication software in Exhibit F suggests the use of communication software to communicate between the credit card reader device in Exhibit E and a credit card center.

The Examiner finds that Shah teaches the desirability of providing access to the Internet in a kiosk-based information system in order to provide users with the many services on the Internet (FR6).

Analysis

The claims stand or fall together with claim 6.

Patent owner argues that Exhibit E fails to disclose or suggest linking the facsimile kiosk with the Internet, and never discusses the Internet, much less accessing the Internet on a pay-as-you-go basis (Br12-14, Issue 3.A). It is argued that "Exhibit E does suggest that the kiosk may be used to access 'information databases,' but only in the context of receiving facsimile transmissions from these databases" (Br12) and, thus, Exhibit E lacks at least the claim limitation of "means for accessing the Internet." It is argued (Br13-15) that the Examiner errs in stating that Exhibit E teaches the limitation of "means for accessing commercial on-line services."

The Examiner responds that Shah is relied upon for its teaching of Internet access via a kiosk (EA8). The Examiner notes that "means for accessing commercial on-line services" does not appear in the Final Rejection (EA8).

Nonobviousness cannot be established by attacking the references individually where the rejection is based upon the teachings of a combination of references. See In re Merck & Co., 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986). That is, it is not persuasive to argue that Exhibits E and F do not teach Internet access when the rejection relies on Shah for this

feature, or to argue that Shah does not teach charging for use of the terminal services when Exhibits E and F are relied upon for this feature. Shah teaches, in 1994, providing Internet access from a public kiosk in order to give users access to the many services on the Internet. Shah suggests that consumers wanted access to the Internet for these services. One of ordinary skill in the art would have been motivated to provide Internet access as an additional pay-for-use service in the public kiosks of Exhibit E and F to achieve this advantage and consumer demand. Since Exhibits E and F have dates of 1992 and 1991, respectively, before the Internet became widely accessible, it is not surprising that they do not mention the Internet. However, technology is not static and it would be expected that the kiosks would be updated to incorporate improvements in technology, such as access to the Internet, that may not have been foreseen at the time. Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49) and the application, as originally filed, acknowledges that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax to provide public online services and public Internet access as those features became common at home and business.

The Examiner did find that Exhibit E teaches "means for accessing commercial on-line services" in the first Office action of August 25, 1999, and the second Office action of June 11, 2001, but did not repeat it in the Final Rejection. It is the examiner's Final Rejection that is reviewed in an appeal under 35 U.S.C. § 134, see In re Webb, 916 F.2d 1553, 1556, 16 USPQ2d 1433, 1435 (Fed. Cir. 1990), but even if the statement had been in the Final Rejection and Examiner's Answer, it would not be reversible error unless it was critical to the merits of the rejection.

Patent owner argues (Br15, Issue 3.B): "Exhibit F fails to disclose, teach or suggest software installed into the CPU to allow interface with the internet and credit card service centers. . . . Furthermore, nothing in Exhibit F discloses, teaches, suggests, or even hints, that the facsimile kiosk is interconnected with the internet."

The Examiner responds that Shah is relied upon for its teaching of Internet access via a kiosk (EA8, two places). The Examiner states that Exhibit F discloses that "TouchNet network management software collects usage and billing data" and discloses a credit card reader allowing payment by major credit cards (EA8).

Neither Exhibit E nor Exhibit F expressly discloses software for interfacing with credit card service centers. Exhibit F states that "TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location." The "network management software" provides management functions and does not suggest communication with credit card centers. Nevertheless, we find that one of ordinary skill in the art of credit-card-based point-of-sale terminals at the time of the invention would have understood that connection of the credit card reader to a credit card center for authorization and charging is implied in both Exhibits E and F; indeed, we think that the average person was aware that credit card readers were connected to credit card centers for charge authorization. Patent Owner does not appear to contest that Exhibits E and F teach, or at least suggest to one skilled in the art, connection of the credit card reader device to a credit card center. As for connection to the Internet, the rejection is based on the combination with Shah, which teaches the use of Web browser software to provide access to the Internet. As discussed in connection with Exhibit E, nonobviousness cannot be established by attacking references individually where the rejection is based

upon a combination of references, and Shah would have motivated one skilled in the art to provide Internet access in a public kiosk environment.

Patent Owner argues that Shah does not teach the use of any software for interfacing with credit card service centers and there is no discussion regarding how a user would pay for the use of the kiosks (Br16). It is argued that the Examiner erred in relying on the commercial organizations at pages 3 and 5, because it is argued that "the commercial organizations' role with the kiosks is as an owner or the kiosk who charges users for the time display an advertisement" (Br16). It is argued (Br16-17):

The Shah article does not discuss the commercial organizations as providing any specific services, let alone charging for Internet access. Furthermore, nothing is disclosed in the Shah article regarding how these commercial organizations will be paid, let alone, the payment by credit card, at the physical location of the kiosk, utilizing software for interfacing with credit card service centers.

The Shaw article does not disclose or suggest that a credit card swipe device should be employed to charge a user for use of the terminal. The Shah article does not discuss the use of a credit card swipe device. It does not specify accessing and interfacing with the Internet.

The Examiner responds that Exhibit E provides a credit card reader to allow payment for services on the terminal (EA9).

Again, nonobviousness cannot be established by attacking references individually where the rejection is based upon a combination of references. We agree with the Examiner that

Exhibit E teaches payment for the use of terminal services using a credit card and credit card reader. Exhibit F also teaches these limitations. Shah states that entities that might implement a kiosk-based information system include "Commercial Information Referral organizations who wish to provide a paid service through such kiosks" (p. 3) and "Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server" (p. 5). Shah does not teach how payment for documents or services would be made, which is why Exhibits E and F are cited.

Patent Owner argues that there is no motivation for the combination, generally citing case law that there must be a reason to combine references (Br10-12; Br17; Br19).

The Examiner repeats the obviousness reasoning (EA10-11).

We conclude that the Examiner has established a prima facie case of obviousness, including motivation for the combination. Patent Owner provides no reason why one skilled in the art would not have been motivated to provide Internet access in the public kiosk environment of Exhibits E and F given Shah's teaching of a public kiosk to allow users access to the many services available on the Internet.

Patent owner discusses European Patent EP 0486160 A2, published May 20, 1992 (Br 18-19, Issue 3.D). The European Patent was cited by the Examiner in the Notice of Defective Brief entered July 13, 2004, (page 3) as pertinent, but not relied upon, as showing a multi-purpose facsimile transmission terminal, which is said to correspond to the TouchFax terminal in the TouchFax article (Exhibit E) and the TouchFax brochure (Exhibit F).

Since the European Patent was not made part of the rejection, it cannot be considered. The statement of the rejection must expressly contain a mention of all references applied in the rejection. See In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970); Ex parte Movva, 31 USPQ2d 1027, 1028 n.1 (Bd. Pat. App. & Int. 1993). The European Patent describes that the terminal is "credit card activated" (col. 1, line 23; see also col. 3, lines 9-10) and describes that "the computer operating program provides a charge by selection, such as fax services, a charge by time used, a charge by the number of pages sent or received, and a charge for the class of telephone calls, whether local, long distance or international" (col. 5, lines 28-32). Although these might be useful additional teachings in the rejection, these teachings

cannot be attributed to or used to fill in any blanks in Exhibits E and F and the Shah article.

Patent owner refers to a statement by Mr. Greg Adank, acting Director of Information Management, Fort Leonard Wood, Missouri, and states that "Mr. Adank has provided an independent analysis of the three items of prior art (Exhibits E, F and I . . .)" (Br20) and "has also provided a straight forward matrix in his analysis that crosswalks the elements of the Appellant[']s claims and the prior art cited by the examiner" (Br20).

The Examiner responds that the statement is not in affidavit or declaration form and is not considered (EA10).

It is not apparent that Mr. Adank's statement adds anything to Patent Owner's arguments. Mr. Adank finds that the TouchFax exhibits do not teach access to online services or the Internet and the Shah article does not teach offering access to the Internet on a point-of-sale basis (p. 6). The Examiner's rejection admits this much. Mr. Adank's statement does not address the questions of motivation and obviousness.

Patent owner argues (Br20-21): (1) the invention provides an unexpected result, specifically a point-of-sale terminal to access the Internet; (2) it was a crowded art; (3) the references do not suggest the modification; (4) the references do not teach what the Examiner says they do, specifically point-of-sale

terminal to access the Internet; (5) the Examiner relies upon a strained interpretation that could only be made by hindsight, as demonstrated by the Examiner's refusal to consider the matrix provided by Mr. Adank; (6) the invention solves a different problem than the references; (7) the Examiner has not provided a convincing line of reasoning as to why the subject matter as a whole would have been obvious; (8) the references do not contain any express or implied suggestion to be combined; (9) it would be necessary to make modifications not taught by the prior art to combine the references in the manner suggested by the Examiner; and (10) that fact that three references must be combined is unequivocal evidence of nonobviousness.

The Examiner responds to (1) that Patent Owner fails to provide any evidence or facts in support of the argument (EA10), and to (10) that the number of references does not, without more, weight against the obviousness of the claimed invention, citing In re Gorman, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991). The Examiner does not address the other points of argument.

We agree with the Examiner's response to (1). Mere allegations of "unexpected results" are not sufficient to show nonobviousness. An "unexpected result" is where the claimed invention achieves more than a combination which any or all of the prior art references suggested. We do not see how paying for

use of a terminal to access the Internet could ever provide an "unexpected result." We also agree with the Examiner's response to (10). Patent Owner's other arguments are token arguments and not persuasive. As to (2), Patent Owner has not demonstrated that it was a crowded art and, if so, how that should affect the obviousness analysis. As to (3), (4), (7), and (8), we find that the references do suggest the modification of adding Internet access to a pay-per-use public terminal. As to (5), it is not clear how the Examiner's refusal to consider Mr. Adank's statement can be considered evidence of hindsight; since we find motivation, the rejection is not based on hindsight. As to (6), Patent Owner has not explained how the problems are different, but, in any case, motivation in the prior art to combine the references does not have to be identical to that of the applicant to establish obviousness. See In re Dillon, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901-02 (Fed. Cir. 1990) (en banc) (holding that an invention may be obvious for reasons the inventor did not contemplate) (overruling-in-part In re Wright, 848 F.2d 1216, 6 USPQ2d 1959 (Fed. Cir. 1988)). In addition, if Patent Owner's problem is defined as how to provide Internet access in a public terminal, this is the problem addressed by the combination of references. As to (9), Patent Owner has not said what other

modifications, not taught by the references and not discussed by the Examiner, are necessary to arrive at the claimed invention.

For the reasons stated above, we conclude that the Examiner has established a prima facie case of obviousness, which has not been shown to be in error. The rejection of claims 6-9 is sustained.

NEW GROUNDS OF REJECTION PURSUANT TO 37 CFR § 41.50(b)

In view of the importance of this case, as evidenced by the two civil actions resulting from the '905 patent and by the three protests, as well as the age of this reissue, we feel that new grounds of rejection are appropriate to put the best prior art on record in a rejection and, in particular, to provide an express teaching of paying for access to the Internet.

References

The following prior art is cited in support of a new ground of rejection.

TOUCHFAX AMERICA, video tape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex in Atlanta, Georgia,² © 1993 TouchFax Information Services, Inc., (Exhibit C to TouchNet Protest) (Artifact No. 09134831VA), including six printouts of frames from the video tape (Exhibit C, 1 to Exhibit C, 6) (Artifact No. 09134831CA).

² See Deposition of Daniel Toughey in Mettke v. TouchNet, No. CV-98-PT-596-E, pp. 40-53, discussing Exhibit 5 to deposition.

TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).³

Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).⁴

VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).⁵

Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA) (hereinafter "L&G ISDN console").

Paul Gilster, The Internet Navigator (2d ed. John Wiley & Sons, Inc. 1994⁶), pp. 15-18, 24, 25, 56, 57, 195, 221-225 (hereinafter "Internet Navigator").

Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. cover, index (2 pages), 82-84 (hereinafter "Aliens").

On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis (hereinafter "On Haiti").

We conclude that all references are prior art "printed publications." TouchFax Exhibit C through Exhibit F were publicly distributed as discussed in the deposition of Daniel Toughey, President of TouchFax (pages of deposition noted in footnotes). TouchFax Exhibits E and F were also previously

³ Id. at pp. 20-25, discussing Exhibit 3 to deposition.

⁴ Id. at pp. 58-59, discussing Exhibit 12 to deposition.

⁵ Id. at pp. 55-56, discussing Exhibit 7 to deposition.

⁶ Published August 25, 1994, according to the copyright records at "<http://copyright.gov>."

discussed to be prior art. The L&G ISDN console brochure was publicly distributed as evidenced by the declaration of Adolf Deyhle (Exhibit E to Griffes Protest).

New grounds of rejection

Claim 9 is rejected under 35 U.S.C. § 112, fourth paragraph, as failing to further limit claim 6 from which it depends. Claim 9 merely repeats all of the elements of claim 6.

Claims 6-9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Exhibit C (including Exhibits C, 1 to C, 6), Exhibit D, Exhibit E, Exhibit F, L&G ISDN console, Internet Navigator, Aliens, and On Haiti, for reasons to be discussed.

Claim interpretation

We interpret "pay-as-you-use" and "payment by a user for use of the terminal" to require payment for use of the terminal to access the Internet.

Obviousness

Factual findings

Scope and content of the prior art

Scope

Patent Owner's field of endeavor appears to be best defined as pay-per-use public communication terminals, and the particular problem with which he was concerned was providing access to the Internet. Exhibits C, D, E, F, L&G ISDN console, and On Haiti relate to pay-for-use public communication terminals and are within the inventor's field of endeavor. The Internet Navigator and Aliens relate to on-line service providers and access to the Internet and are reasonably pertinent to the problem of providing Internet access. Thus, we find the references to be within the scope of the prior art.

Content

Exhibit C is a videotape recorded May 14, 1993, and distributed by TouchFax Information Services as advertising at the May 1993 Comdex trade show in Atlanta, Georgia. The video tape advertises the use of the TouchFax kiosks for a variety of purposes including pay-per-use access to the Prodigy online computer service provider and for connection to the Internet,

although no kiosks had been built to perform these functions.⁷ Exhibit C, 1 is a printout of a video frame showing the opening title and production date of May 14, 1993. Exhibit C, 2 is a printout of a video frame showing a customer inserting a credit card into the TouchFax unit to activate the unit. Exhibit C, 3 is a printout of a video frame which specifically advertises connection to the Prodigy Information Service, a well-known online computer service provider in 1993. Exhibit C, 4 is a printout of a video frame which specifically advertises connection to the Internet. Exhibit C, 5 is a printout of a

⁷ See Deposition of Daniel Toughey in Civil Action No. 98-PT-596-E, pp. 44-45, indicating that video was a marketing tool, intended to show possible uses:

Q: (By Mr. Polasek [Attorney for Patent Owner]) Now that we have been able to stop the tape, it shows a rectangular gold block labeled [sic] internet. I think it is right at -- I thought it was the 36 second mark. It may be 34.

MR. STITT [Attorney for Defendant]: It appears to be 34.

Q: (By Mr. Polasek) Did that provide for access to the internet? If the user was to touch that icon, I guess it what you would call it, that portion of the TouchNet screen, does that enable a user to gain internet access or do you know?

A: Not at that time, no. That was like MCI mail above it. Those are possible uses for the system. And so the reason we built this video was to sell our systems. And so, again, the vision of TouchFax, TouchNet was its multipurpose information communication terminal that, depending on what our customers, whoever owned these things wanted to provide, they could provide that type of information.

video frame showing a user at a TouchFax unit using the keyboard and showing the credit card reader device. Exhibit C, 2 is a printout of a video frame showing a second display of the Prodigy Information Service being offered and being advertised in the video tape as an online connection option.

Exhibit D is a diagram teaching use of a TF750 Public Terminal as a data and communications system. Exhibit D teaches a system which includes a "TouchFax Electronic Library" which serves as a "Gateway to Fax & Computer Services." The computer services include an "on-line interactive data base" including "CompuServe, Prodigy" online providers.

Exhibits E and F have been previously described.

The Internet Navigator describes that the Internet is a network of networks, which is made from computers and cables (p. 15). The Internet provides many different applications or services, such as e-mail (electronic mail), file transfer, and remote login (pp. 24-25). Commercial online services,⁸ such as

⁸ "Online service provider" is defined in "http://en.wikipedia.org/wiki/Online_service," where the original meaning is what applied in 1994:

An online service provider, in modern usage refers to an entity which provides a service online. It can include internet service providers and web sites, such as Wikipedia's or Usenet (commonly accessed through Google Groups). In its original more limited definition it referred only to a commercial computer communication service in which paid members could dial via a computer modem the service's private computer network and access various services and

CompuServe, were centralized as opposed to distributed like the Internet (pp. 17-18). "[C]ommercial providers such as CompuServe, GENie, and Prodigy have all made Internet mail access available" (p. 16; see also, pp. 57, 195; e-mail at pp. 221-225).

Thus, many online service providers, such as Prodigy, provided access to the Internet via e-mail. The World Wide Web (WWW) is a collection of documents linked by hyperlinks and URLs (pp. 388-396) and is a service that runs on the Internet.⁹ The claims recite access to the Internet, not to the WWW, and are met by access to one service on the Internet, such as e-mail.

Aliens describes that online service providers such as America Online, CompuServe, GENie, and Prodigy were providing access to more features of the Internet in 1994. It is stated

information resources such a bulletin boards, downloadable files and programs, news articles, chat rooms, and electronic mail services. The term "online service" was also used in references to these dial-up services. The traditional dial-up online service differed from the modern Internet service provider in that they provided a large degree of content that was only accessible by those who subscribed to the online service, while ISP mostly serves to provide access to the internet and generally provides little if any exclusive content of its own.

⁹ "[T]he Internet and the World Wide Web are not synonymous: the Internet is a collection of interconnected computer networks, linked by copper wires, fiber-optic cables, wireless connections etc.; the Web is a collection of interconnected documents, linked by hyperlinks and URLs, and is accessible using the Internet. The Internet also provides many other services including e-mail, file sharing and others"
"http://en.wikipedia.org/wiki/Internet."

that many of the services have offered e-mail gateways to the Internet for some time; e.g., "Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time" (p. 83); "GENie has been offering an e-mail gateway to and from the Internet for several years, but nothing more" (p. 84); "Prodigy already has an e-mail gateway to the Internet ..." (p. 84). This qualifies as "access to the Internet." Aliens also describes that online services have charged hourly fees for Internet services (p. 84).

L&G ISDN console describes a free-standing ISDN (Integrated Services Digital Network, an international standard for switched, digital dial-up telephone service for voice and data) payphone capable of accessing Videotex services available to the general public. Videotex was the first attempt at interactive information delivery for shopping, banking, news, etc. Videotex uses a box and keyboard associated with a video display. Data are delivered by phone line and stored in the box as predefined frames with limited graphics that are retrieved by menu.¹⁰ The payphone has a telephone access node (required in a payphone); a credit card reader; a video display monitor; a keyboard; a modem (inherently required to connect to the Videotex service); means (software and hardware) to access commercial online Videotex

¹⁰ See "<http://en.wikipedia.org/wiki/Videotex>."

services; and must contain a microprocessor. "The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal." "For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data." "[Videotex] services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour." No printer is disclosed.

On Haiti describes that "'Cyberia' -- a 'cyberspace cafe' -- has opened recently in central London offering coffee, cakes and connection to the Internet. Connect charge: 1.95 British pounds per half-hour." The computers for this cafe inherently must have a CPU, monitor, keyboard, modem, means for accessing the Internet and allowing user interaction, and software installed into the CPU to allow interface with the Internet. There must inherently be telephone access node to allow access to the Internet. Thus, On Haiti discloses payment for use of a terminal access to the Internet, but does not describe payment using a credit card, or a credit card reader swipe device connected to a credit card service center, and does not describe a printer.

Differences

The differences between the subject matter of independent claim 6 and the pay-for-use public TouchFax terminal of Exhibits E and F is that Exhibits E and F: (1) do not expressly disclose connecting to a credit card center; (2) do not disclose providing access to the Internet; and, so, (3) do not disclose charging for using the computer terminal to access to the Internet.

The differences between the subject matter of independent claim 6 and On Haiti are that On Haiti does not describe:

- (1) payment using a credit card via a credit card reader swipe device connected to a credit card service center; and
- (2) a printer.

Level of ordinary skill in the art

The level of ordinary skill in the art is evidenced by the references, as previously noted.

The references of record demonstrate that those of ordinary skill in the relevant arts knew: (1) pay-for-use public communications terminals providing for pay-for-use telephone, facsimile, computer, and communication services were well known, see Exhibits C-F and L&G ISDN console; (2) access to the Internet, at least to e-mail services on the Internet, was commonplace in 1994 and was provided by online service providers, such as CompuServe and Prodigy, see Internet Navigator and

Aliens; (3) online service providers were starting to provide access to more than e-mail services on the Internet in 1994, see Aliens; (4) charging for use of a public computer terminal to access the Internet was known, see On Haiti.

In addition, although not relied upon in this rejection, we note that Patent Owner's expert Mr. Adank described the knowledge of those of ordinary skill in the art in his "General Observations" (p. 1):

Typical home and business computers (Intel based 286/386 and other compatible class processors) were capable of performing all tasks and features described in your background description of prior art. Specifically, those systems were capable of sending and receiving faxes via internal or external modem, generating electronic documents and printing or faxing them to a remote terminal, communicate with on-line service providers (Prodigy, CompuServe, AOL), as well as to be used to communicate on the Internet via Internet service provider (ISP). The ability to couple a credit card reading device to a computer terminal was also common place during this time as many point-of-sale devices (i.e. cash registers) were in fact systems built from the core components found inside a computer terminal.

Objective evidence of nonobviousness

There is no objective evidence of nonobviousness.

Motivation

The motivation to combine any of the teachings of TouchFax Exhibits C, D, E, and F is that all exhibits are from the same corporation, TouchFax, and expressly teach modifications,

variations, and improvements to a pay-for-use public communications terminal. Thus, the teaching of Internet access in Exhibit C suggests modifying Exhibits E and F to provide Internet access, and the teaching on providing access to online service providers in Exhibit D suggests modifying Exhibits E and F to provide access to online service providers.

Since Exhibit C to Exhibit F disclose pay-for-use public terminals, this suggests payment for use of any service provided by the terminal, including services that may be added later.

L&G ISDN console teaches connection of a credit card reader to a credit card center for authorization and collection of credit card charges, which expressly provides motivation for connecting credit card readers to a credit card center, if proof of this common fact is needed.

Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49), which suggests modification of the terminal to provide services on a public terminal as those services become common at home and business.

On Haiti discloses payment for use of a public terminal to access the Internet, which expressly provides motivation for charging for Internet access in other public terminals.

The Internet Navigator and Aliens teach that online service providers provided access to e-mail services on the Internet in 1994, which expressly suggests that any access to online service providers in 1994 would have provided access to the Internet.

Analysis

"[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art." In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). "The question is whether it would have been obvious to one of ordinary skill in the art, working with the . . . [prior art] references before him, to do what the inventors herein have done" Id. at 425, 208 USPQ at 881-82. The collective teachings of the references do not depend on the order in which the references are modified. See In re Bush, 296 F.2d 491, 496, 131 USPQ 263, 267 (CCPA 1961) ("In a case of this type where a rejection is predicated on two references each containing pertinent disclosure which has been pointed out to the applicant, we deem it to be of no significance, but merely a matter of exposition, that the rejection is stated to be on A in view of B instead of on B in view of A, or to term one reference primary and the other secondary."). We have applied more than the minimum number of references needed to meet the claims in order to provide evidence of the level of ordinary skill in the

art and motivation, and to show different ways to approach the obviousness question.

We approach the obviousness issue from two directions. First, Exhibits E and F are selected as the main references because they describe the general pay-for-use public terminal described in the original application, and we then show why it would have been obvious to modify the terminal to provide for pay-for-use access to the Internet. Second, On Haiti describes payment for use of a computer terminal to access the Internet, but does not disclose payment using a credit card reader or a printer, and we explain why it would have been obvious to add a credit card reader and printer.

(1)

Exhibits E and F describe essentially the same pay-for-use public communications terminal providing services of receiving and sending facsimiles, word processing, copying, and printing. Although Exhibits E and F do not expressly teach that the terminal connects the credit card reader to a credit card service, one of ordinary skill in the art of credit-card-based point-of-sale terminals at the time of the invention would have understood that connection of the credit card reader to a credit card center for authorization and charging is implied in both Exhibits E and F; indeed, we think that the average person was

aware that credit card readers were connected to credit card centers for charge authorization. Patent Owner did not contest that Exhibits E and F teach this feature. Nevertheless, L&G ISDN console teaches a credit card reader in a public communications terminal, which communicates with a credit card service center ("For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.") and one skilled in the art would have been motivated to add a connection to the credit card center in Exhibits E and F to provide authorization of cards and collect amounts charged for communication services. Exhibits E and F disclose "causing the printer to print a receipt or any other document available from a commercial on-line service," as recited in claim 8, because Exhibit E discloses "terminal provides a detailed printed receipt of the transaction" and can print documents such as flight schedules from the OAG database, a commercial online service, and Exhibit F teaches a terminal with a printer and access to commercial databases. Claim 9 adds nothing to claim 6. Claim 7 remains rejected as lacking written description, but, nevertheless, Exhibits E and F and L&G ISDN console all show a keyboard that controls a computer.

There are at least three reasons why it would have been obvious to add access to the Internet as a pay-for-use feature on Exhibits E and F.

(1) (a)

Exhibit C (see Exhibit C, 4) expressly discloses that the TouchFax terminal can be built to provide access to the Internet. The fact that Exhibit C is a later improvement of the TouchFax terminal of Exhibits E and F, and is by the same corporation, provides the express suggestion to modify Exhibits E and F to provide access to the Internet. Exhibit C is not been applied as the main reference because it is easier to point to teachings in writings than in a video tape. Because Exhibits C, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to the Internet.

(1) (b)

Exhibit D discloses that it was known to be able to connect the TouchFax pay-for-user terminal to online service providers, such as CompuServe and Prodigy, in 1991. The fact that Exhibits D, E, and F all relate to a TouchFax terminal by the same corporation provides the express suggestion to modify Exhibits E and F to provide access to online service providers.

Because Exhibits D, E, and F are pay-for-use public terminals, one skilled in the art would have been motivated to charge for access to all telephone, facsimile, and computer services, including an added computer service of access to an online service provider. The Internet Navigator and Aliens describe that online service providers were providing access to at least Internet e-mail by 1994, and Aliens describes that the trend among online service providers in 1994 was to provide access to more Internet features than just e-mail. Therefore, Internet Navigator and Aliens would have suggested to one skilled in the art at the time of the invention that the online service providers on the TouchFax terminal provided Internet access via e-mail or, at least, that providing Internet access would have been obvious modification. In addition, Exhibit E states that "'The TouchFax is designed to emulate exactly what a person will be able to use in their homes,' says Massey" (p. 49) and the application, as originally filed, acknowledges (as it must) that home and business provided access to online service providers and the Internet; thus, there is a suggestion to modify the TouchFax kiosk to provide communications services (e.g., online services and Internet access) in a public terminal as those features became common at home and business. Again, since the TouchFax terminal is a pay-for-use-of-services terminal, one skilled in

the art would have been motivated to charge for access to the online service provider which provides Internet access.

(1) (c)

On Haiti discloses charging for use of a public computer terminal to access to the Internet. One of ordinary skill in the art would have been motivated to add pay-for-use Internet access to the pay-for-use public terminals of Exhibits E and F because it merely adds an additional pay-for-use service.

(2)

On Haiti discloses charging for use of a public computer terminal which provides access to the Internet, but does not describe payment using a credit card, or using a credit card reader swipe device connected to a credit card service center, and does not describe a printer. One skilled in the art of credit card transactions would have been motivated to provide a credit card reader to allow users to charge their credit cards for the convenience of the service provider as well as the user in view of Exhibits E and F and the L&G ISDN console. Connection to a credit card center was so well known that its use is considered to be implied in Exhibits E and F, but, nevertheless, the L&G ISDN console expressly discloses connection to a credit card center for authorization and charging. One of ordinary skill in the art would have been motivated to provide a printer

to the computer terminal in On Haiti because printers were used with computers to provide hard copy records of what was viewed, such as e-mails, and the use of printers with public computer terminals was known as evidenced by Exhibits E and F.

CONCLUSION

The rejection of claim 7 under 35 U.S.C. § 112, first paragraph, is sustained.

The rejection of claims 6-9 under 35 U.S.C. § 103(a) is sustained.

New grounds of rejection have been entered as to claim 9 under 35 U.S.C. § 112, fourth paragraph, and as to claims 6-9 under 35 U.S.C. § 103(a).

This decision contains new grounds of rejection pursuant to 37 CFR § 41.50(b) (2005). 37 CFR § 41.50(b) provides that "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2004).

AFFIRMED - 37 CFR § 41.50 (b)

Lee E. Barrett
LEE E. BARRETT
Administrative Patent Judge

Jameson Lee
JAMESON LEE
Administrative Patent Judge

Sally C. Medley
SALLY C. MEDLEY
Administrative Patent Judge

**BOARD OF PATENT
APPEALS
AND
INTERFERENCES**

ATTACHMENTS:

- (1) Rawan Shah, Suggestions for Information Kiosk using the World Wide Web, <http://www.rtd.com/people/rawn/kiosk-paper.html> (April 30, 1994), download date 2/3/99, pp. 1-5 (Exhibit I to Protest by North Communications, Inc.)
- (2) The World Wide Web Conferences, 1994-1995 Kiosk Papers, <http://www.visi.com/~keefner/pdfs/twwwc.htm>, pp. 1-3 (of 113) (not prior art).
- (3) Black and white copies of Exhibits C,1 to C, 6, which are copies of frames from TOUCHFAX AMERICA, video tape recorded May 14, 1993.

- (4) TouchFax Network Topography Diagram, © 1991 TouchFax Information Systems, Inc. (Exhibit D to TouchNet Protest).
- (5) Allen Weiner, TouchFax Provides the Ultimate In Place-Based Interactivity, Interactive World (October 1992), pp. 48-49 (Exhibit E to TouchNet Protest).
- (6) VISION ... POWER ... VERSATILITY, F700 Public Communications Terminal brochure, TouchFax Information Systems, Inc. (© 1991) (Exhibit F to TouchNet Protest).
- (7) Landis & Gyr, ISDN console, Public telephone and telematic console, available in 1988 (Exhibit C to Protest of Griffes Consulting SA).
- (8) Paul Gilster, The Internet Navigator (2d ed., John Wiley & Sons, Inc. 1994), pp. 15-18, 24, 25, 56, 57, 195, 221-225.
- (9) Andrew Cantor, Aliens Among Us, Internet World, Nov/Dec 1994, pp. 82-84.
- (10) On Haiti, Shooting From the Lip, Washington Post, October 6, 1994, from Lexis/Nexis.
- (11) Statement by Gregory W. Adank received April 24, 2002.
- (12) Declaration of Adolf Deyhle (Exhibit E to Griffes Protest)
- (13) Deposition of Daniel Toughey in Mettke v. TouchNet Information Systems, Inc., No. CV-98-PT-0596-E (N.D. Ala. filed March 16, 1998), pp. 1-5, 20-25, and 40-59.
- (14) Background definitions from wikipedia.org (not prior art)

Internet: "<http://en.wikipedia.org/wiki/Internet>," p. 1/10.

Online service provider: "http://en.wikipedia.org/wiki/Online_service," 2 pages.

Videotex: "<http://en.wikipedia.org/wiki/Videotex>." 4 pages.

Appeal No. 2006-0625
Reissue Application 09/134,831

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Suggestions for Information Kiosk Systems using the World Wide Web

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The World Wide Web Information Kiosks Special Interest Group

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Abstract

Information kiosks provide users with access to community and local information in an easily understandable format. They are designed to be used by the average user who has little or no experience with computer or information systems. Kiosk-based information systems are already available at a variety of locations from airports to shopping malls to community information centers.

The World Wide Web has provided the Internet with an easy interface superceeding other access systems with its popularity and its capabilities. The Web naturally lends itself to a distributed kiosk-based information system although there are special requirements for such a system that current Web clients and servers do not provide.

In this paper we examine the requirements that an information kiosk system based upon the World Wide Web must have before it can be widely accepted as a distributed information system for commercial and non-commercial needs.

kiosk based

Introduction

A Kiosk-based Information system has many requirements to create the most user-friendly interface while maintaining security and functionality. User-friendliness is the most important factor for a public access information system because of the nature of the majority of its customers as non-computer professionals. Other factors that must also be considered for these systems are the functionality and security of the servers.

The Effectiveness of the World Wide Web as Kiosk-based Information System

The first question that should be asked is why one would use the World Wide Web as a design for a kiosk-based information system. We have identified the reasons why the Web is ideally suited for this application:

- the Web has proven itself as a successful networked information system through its popularity on the Internet.

EXHIBIT

I

Attachment A

- a multimedia tool is the primary type of program used by information systems because of the combination of text, graphics and sound are more appealing. The many different Web browsers have these capabilities already.
- the Web is part of the Internet. This allows users access to the many services on the Internet.
- the ability of the Web to access other programs and services allows programmers to extend the capabilities of the server.
- the Web is a widely accepted standard as opposed to proprietary commercial multimedia systems which holds promise for its growth and development.

"Web Design"

Who will use these systems?

The next question asks who will actually implement and who will use these systems. There has been varied interest by commercial and non-commercial organizations in the World Wide Web. Currently there are several projects underway to develop a commercial version of popular Web browsers as well as commercial services for these browsers.

The following are some examples of who might implement such kiosk-based information systems:

- Commercial, educational and governmental organizations who need to provide in-house information systems about their products and services. For example, hotels, amusement parks, shopping malls, etc.
- Communities and organizations who want to install public access booths to provide community information at key locations within the community, such as community information networks, University campuses, Airport authorities, etc.
- Commercial Information Referral organizations who wish to provide a paid service through such kiosks.

The Access Interface

The Access Interface comprises both the programs as well as the computer hardware necessary for a kiosk-based information system. This includes the Web browser or client program, the output hardware (the visual display unit, a sound system, printing systems), the input hardware (touch-screen systems, keyboards, light-pens & stylus, keypads, etc.), the kiosk-local processing hardware (if any), kiosk-local cache or information storage (if any), and the network connection hardware.

The user interface or Web browser will be accessed by the average user who may have very little or no experience with computer system. The user interface for a kiosk-based information system should be:

- Easy to use controls. Controls for the kiosk system should be understandable and easy to handle.
- Easy to understand information display. The text or visual information should be easily readable and understood in content and form by the user.
- Access to contents should be as direct as possible. The user should have to go through as few steps as possible for to reach the information they require.
- Documents should be transferred in as short an access time as possible or present a failed message if the time to access the document is longer than a certain amount considered as $t=\infty$.
- The program interface should be able to return to a default home page automatically when left idle for an extended period of time.
- The physical unit should be reasonably secure to tampering or vandalism so as not to provide incorrect information.

The following are suggested requirements for an access interface based upon the above suggestions:

• Physical Requirements

- A minimal number of input devices so as not to confuse the user.
- Easy to use input devices such as a touch-screen or stylus based system
- The unit must be at an adequate height so that it is accessible by most people including handicapped users.
- The output devices should be easy to understand. Visual display output devices should be large enough to be read without difficulty by any type of user. A sound system should be clear enough to be understood but not loud enough to offend.
- Security against vandalism or theft of the kiosk should be maintained.
- A set of clear operating instructions for the booth must be displayed in some form on the physical unit of the booth to ensure proper usage.

• User Interface Program

- Non-essential items such as buttons or menubars not directly related to the content of each page or not required for the correct usage of the system should not appear. Such items may also give a user access to secure or incomplete areas of the Webpage.
- A common device such as a toolbar should always be present to provide users with a central control mechanism to the interface system. For example, users may wish to return to the home page or skip back to previously viewed pages. This device should be modifiable to the requirements of specific installations.
- Support for internationalization and non-English languages and character sets.
- The program should be able to keep track of the history of documents accessed by the user. It should be able to understand different usage sessions counting each session as one beginning from the home page. It should remove the history of access from previous sessions.
- It may be able to display graphics and movies and play digitized sounds and voice overs.
- It may be able to launch other programs to be presented upon the same output devices.
- There should be a diagnostic mode for servicing the program or the kiosk-local system.

The Server

There are also suggested requirements for the Server program for these information kiosk systems. Commercial organizations will most likely have an invested interest in such information kiosk systems and may require that certain procedures should be followed by the servers for these systems.

Note that each kiosk may be a standalone system containing all the local information and with a link to the rest of the network. This would be a fast but costly system since the information requested the most often would be on local storage media. This may also be difficult to implement and maintain if there is a large amount of data. However, it will reduce the cost of the network link if a non-permanent circuit or dial-up connection is used.

Each kiosk may in turn be a client only system which access the information over the network link from a remote server and caches the information locally. To transfer the information from the server down to the kiosk may take some time but it saves cost and reduces the maintenance. This may be expensive if network connect time charges are expensive.

Functionality

Functionality of the server is key to its success. The more special functions it serves and the greater the extensibility of the server program, the better its chances of success as a popular system.

The server should be able to access foreign databases which act as storehouses of raw data. The server should be able to locate these databases and the information within with the least amount of processing or translation.

The server should have good support for graphics and graphical enhancements. The concept of imagemaps are almost a must. Mapping between commands and images enhances the ease of use of system. Also useful would be a reverse of the imagemap concept where a user selects an item or enters a piece of text and its corresponding image is displayed.

Storage and Transfer

Since these kiosks may be located at remote sites, the problems of data storage, caching and transfer becomes important especially considering that the information has to be presented in a rapid and predictable manner.

The problems of data storage are directly related to the actual implementation and hardware requirements of the system. Although no specific suggestions have been made as to the actual computer system required for a kiosk-based information system, the general trend is to use cheaper and cost-effective equipment to reduce the problems of theft, vandalism, or damage.

If the server and data is located locally, the kiosk would only require to use the network when accessing remote documents. The kiosk-local computer system would not require a very large cache area since the documents can be accessed very rapidly.

If the server is located remotely more considerations come into play. The server must be able to respond and transfer documents in a limited amount of time over the network link. Servers might also be able to offload requests to other similar servers when they are too busy to respond. This suggests a form of server to server communication and load-balancing which is currently not a part of the HTTP specification. The data may require to be replicated across several storage systems and duplicate servers on other computer systems may be necessary as a failsafe measure to ensure constant access.

Security

Security of the server depends upon the type of implementation of the kiosk, whether standalone or remote server based. However, certain common elements exist in both, such as physical access to the server's computer system. Access to the console of the server should only be allowed to secure personnel to ensure the safety of the information.

Network security is another issue. Access to the computer network that the servers are located on should be secure to reduce the chance of computer cracking or vandalism of the information. Since most servers run on common operating systems such as UNIX, VMS, etc., operating system security is also a crucial element in the safety of the information.

Data managers should decide upon a protocol for operator access, updating and maintenance of the information since it can affect the lives of many others.

Another form of access is dependent upon the content of the documents. A public system will not often

contain restricted documents but data managers may wish to restrict certain areas of their Webspaces dependent upon their own criteria.

Control

Control involves the access to the server and kiosk system for diagnostic examinations and also modification of the information space. Control is tied in very closely with security.

Operators and Data Managers may wish to log access to documents for statistical analysis. Keeping accurate logs of document access can help administrators anticipate growth of the installation.

Each installation should be able to decide which URI's are accessible through their server. Some installations may decide that they do not wish to provide their kiosks with access to the "news" or "mailto" services.

Commercial organizations may also wish to charge customers for access to specific documents or services. The concept of registered users and billing may be built into the server.

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PLAY TOUCHFAX 00:00:08
Information Systems, Inc.
TOUCHFAX AMERICA

TIME 1:20
WITH MUSIC

Audio: Mono

Recorded: 5-14-93

VPR Creative Graphics: 01:4

EXHIBIT

C-1

Moore No. 5119

310:13:1E

0:00:19:4

EXHIBIT
C, 2

Sherrill No. 8119

TouchFax
NEO

1 Year Rental



TouchFax

For Sales	For Service	For Training
Business Services	Business Services	Business Services
Computer Services	Computer Services	Computer Services

NEO

PROTECTOR
SCREENS

04:00:25:15

Hot Mail

Internet

EXHIBIT

C, 4

berg No. 8113

040028433

EXHIBIT
C, 5

0:00:34:9



0:01:16:6

EXHIBIT
C-6

Shang No. 5119

TouchFax

TouchFax Provides The Ultimate In Place-Based Interactivity

By Allen Weiner, Editor

If you think of TouchFax Information Services, Inc., as a company that manufactures public fax machines, you have only part of the picture. In the rapidly growing arena of place-based media, TouchFax is creating products that will allow consumers the same sort of interactive capabilities as they will have with their home-based interactive appliances.

"We believe the information for the machine can be strategically designed for the location type so the type of services and the type of information that can be retrieved interactively on our terminals can be totally different from one machine to another," says John Massey, the machine's creator and chairman of the Lenexa, Kan.,-based company.

"We always will have a basic set of common services that are available on all machines," he adds. "But, particular machines will have unique sets of advertisements and promotions on them, as well as related services that relate to the type of people that frequent a particular type of location."

And locations are key to the TouchFax family of products. Massey believes they are best utilized in places where "a number of different types of users can interact with their desired and preferred telecommunications service." Airports, hotels, truck stops, apartment complexes and even supermarkets are ideal for these multi-functional, multimedia machines.

TouchFax hardware products include three models of public terminals used initially as pay-per-use fax machines. They also can provide other services such as word processing and high-quality copies in addition to its primary communications capability of phone, fax and computer. Service products include personal fax mailboxes and information services which may be accessed by TouchFax public terminals and any private fax machines.

The TF Series public terminals are location specific and are designed to meet the space in which they will reside. For example, a lower cost unit designed for lower traffic locations also has a smaller paper storage capacity and would require more frequent service calls if placed in a high traffic location.

All TouchFax terminals use proprietary



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Attachment C 1

EXHIBIT
E

software to create an easy-to-use visual control panel. This user interface to the machine is displayed on a touch-sensitive color video monitor which provides instructions to the user and on-screen buttons to operate the terminal functions.

Documents to be sent are scanned on a jam-proof flatbed scanning device which operates much like a standard copy machine. Payment for services is made by using credit card or other magnetic card such as a telephone calling card. The terminal provides a detailed printed receipt of the transaction for expense account record keeping.

"It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

The TouchFax Electronic Library is a collection of information products organized by category. These information products are made available by combining information databases and high-resolution fax printer output with the ease of remote telephone communications. Information products are available on TouchFax public terminals and from any private fax machine.

On a TouchFax public terminal, the touchscreen provides an interactive dialog between the consumer and the information provider. For example, a consumer can select OAG FlightFax to get up-to-the-minute flight information, seat availability and fares. The consumer is guided through a series of video screens requesting their specific flight schedule. The TouchFax public terminal then sends the information via computer modem to OAG's database and a one-page personalized report is delivered to the TouchFax terminal by facsimile.

To access the TouchFax Electronic Library from your home or office requires a touch-tone telephone. A user responds to a series of audio prompts and directs the document to his home or office fax machine. For example, consumers can define the content of an up-to-the-minute special interest newsletter compiled from the news resources of *USA Today*.

Users also can request details of forecasters weather conditions in their destination city, maps and directions to specific locations, as well as city guides with suggestions on where to dine and what to see. Other services are oriented specifically toward entertainment and include popular business book summaries, personalized cartoon fax messages and event schedules.

In essence, TouchFax provides the future interactive appliance user a similar service to what he will be able to access with his Interactive Video Data Service terminal, touchscreen telephone or interactive cable device. So, home or away, the consumer can be interactive.

"The TouchFax is designed to emulate exactly what a person will be able to use in their homes," says Massey. "It's a system that will be deployed nationally and internationally that is designed to be a public terminal, as well as a service that goes into the home."

FREE EVALUATION



Bill Fawcett the producer of the Ricardo Montalban T.V. Infomercial show is now looking for more amazing products for T.V!

- Joint Venture Funding available through the RRAM Corporation for media purchase
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To submit your products for a free evaluation.

Fawcett's VideoMarketing
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Suite #B - 204
Irvine, California 92718
Fax: (714) 753-7470

READER SERVICE NO. 29

(6)

VISION...

Leaders see the possibilities before they become obvious. The TF700 is designed with the understanding that the information age is just beginning. It incorporates the latest technology into an integrated system that can meet the communications needs of today and tomorrow.

POWER...

Every leader has a great mind. The "mind" of the TF700 is a powerful hardware/software system engineered to provide a comprehensive set of communication functions. TouchNet™ network management software collects usage and billing data, monitors equipment status and uploads documents, software and video screens. This enables operators to remotely manage thousands of TouchFax terminals from one location. The TF700 has the additional power to access other computer systems and enhanced fax services like our own InfoTouch™ electronic library.

VERSATILITY...

Leaders stay responsive to changing circumstances. The TF700 is a versatile platform that can adapt to take advantage of new technologies and opportunities, while meeting many present needs.

~~~~~Public Fax has arrived.

The TF700 is the most complete solution to the needs of the rapidly growing public fax market. It provides high quality fax, jam-free operation and plain paper output in a convenient, self-service terminal.

-----Information Access is the key.

The TF700's self-instructing touchscreen interface encourages the general public to utilize the many information databases available.

~~~~~Word Processing is a plus.

The full-sized keyboard offers the business traveler the perfect solution to composing and printing a letter or even personalizing a greeting card.

.....Video Advertising works.

The TF700's high-resolution color monitor provides a powerful medium to deliver advertising messages. In addition, each video ad screen can be linked to a printed coupon or sales literature that is instantly printed and delivered at the touch of a button.

TF

THE PUBLIC COMMUNICATIONS TERMINAL
OF TOMORROW... FOR INDUSTRY LEADERS TODAY.

TouchFax

INFORMATION
SYSTEMS, INC.

15520 College Boulevard, Lenexa, Kansas 66219
Phone: (913) 599-6699 (800) 869-TFAX (8329) Fax: (913) 599-5588

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Distributor:

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Grand Pré 70, CH-1211 Geneva 16
Tel.: 022 733 55 00 Telefax: 022 733 52 19 Telex: 751 703

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EXHIBIT

F

The demand for public communication services is growing. Many of the largest telecommunications companies in the world have seen the handwriting on the wall. Several industry leaders have already responded by selecting TouchFax as their product of choice.

In the new TF700, TouchFax has combined precision engineering and powerful functionality to create the industry's most advanced personal communication center. At the touch of a few buttons, the new TF700 can put anyone in touch with the world through an extensive menu of essential services including:

telephone; send or receive a fax; photocopying; word processing; and laser printing; and access to a growing network of information databases from Wall Street news to international sports scores.

Handset and Hookswitch are AT&T quality, delivering high performance and durability.

External Speaker gives clear audio feedback of busy signals, fax tones, or voice prompts.

Access Door provides convenient access to internal components, extra paper and supplies.

Ergonomically Designed Cabinet with heavy duty steel construction comes in a variety of finishes. Custom colors are available.

TF

Public Communications Terminal



14" Color TouchScreen Monitor offers unrivaled ease of use and displays information and ads in sharp, brilliant colors.

Credit Card Reader accepts major credit cards, phone cards, and can be programmed to accept custom cards.

Full-sized Keyboard extends for computer database access or word processing, and retracts when not in use.

Option Panel adds station or floppy disk drive, optical card reader, laptop or modem connections.

300 DPI Flatbed Scanner delivers high resolution with jam-free, photocopier-like operation.

386 CPU with 40 megabyte hard drive, proprietary control interface and integrated fax and data/modem capabilities.

300 DPI Laser Printer offers crisp, high-resolution printing on plain paper and an optional 700 sheet paper tray.

Compact Footprint of just 24"W X 28"D lets the TF700 fit in almost anywhere.

TouchFax is a registered trademark. © 1991 TouchFax.

Touch

The Leader in Public Communications Systems

Now the information age is for everyone. The TF700 provides a friendly, touchscreen window to a universe of information available from on-line computer and fax information services. Never before has the public had easier access to such a wide range of printed information.

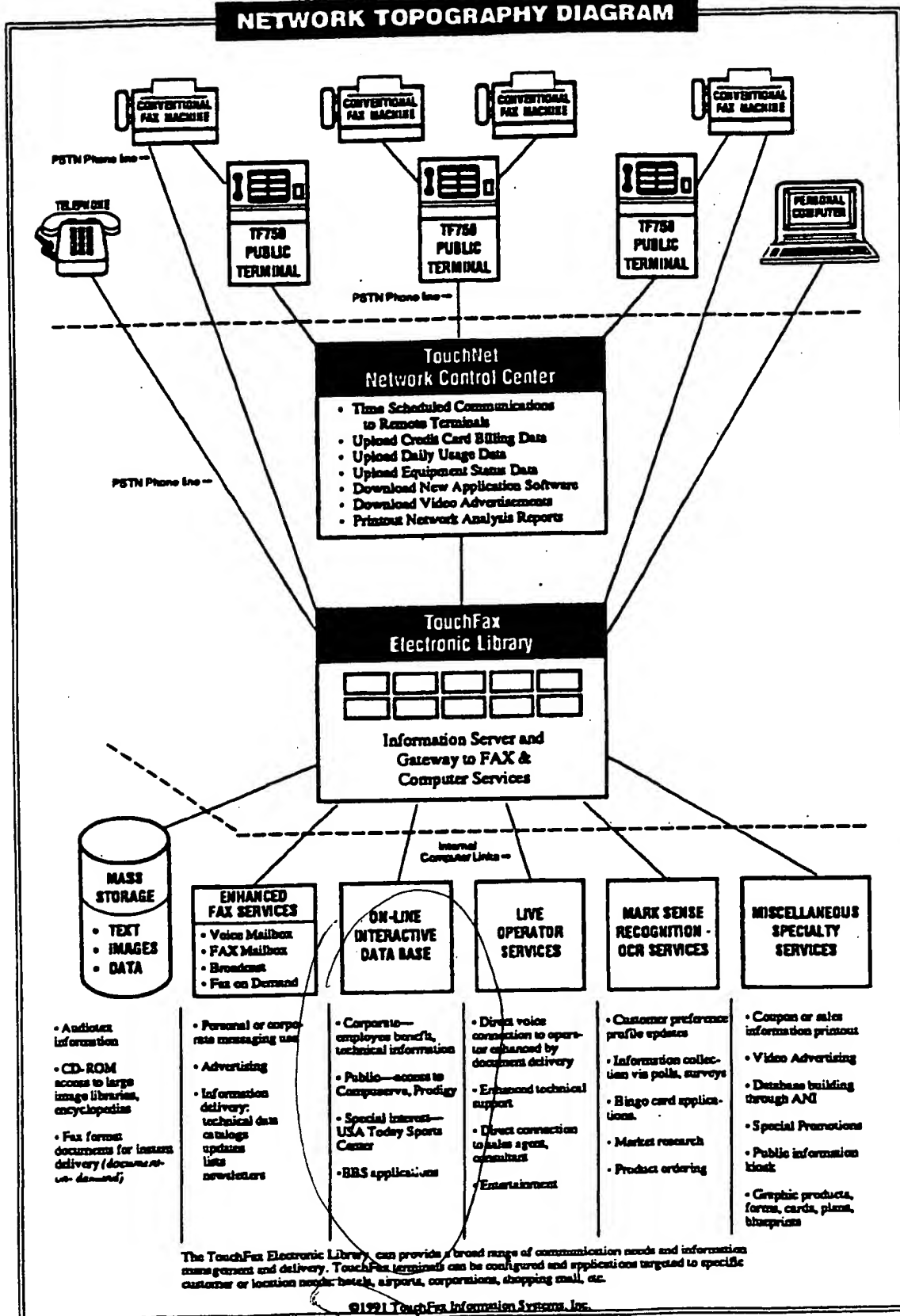
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— Attachment D—

(7)

TouchFax

NETWORK TOPOGRAPHY DIAGRAM



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ATTACH

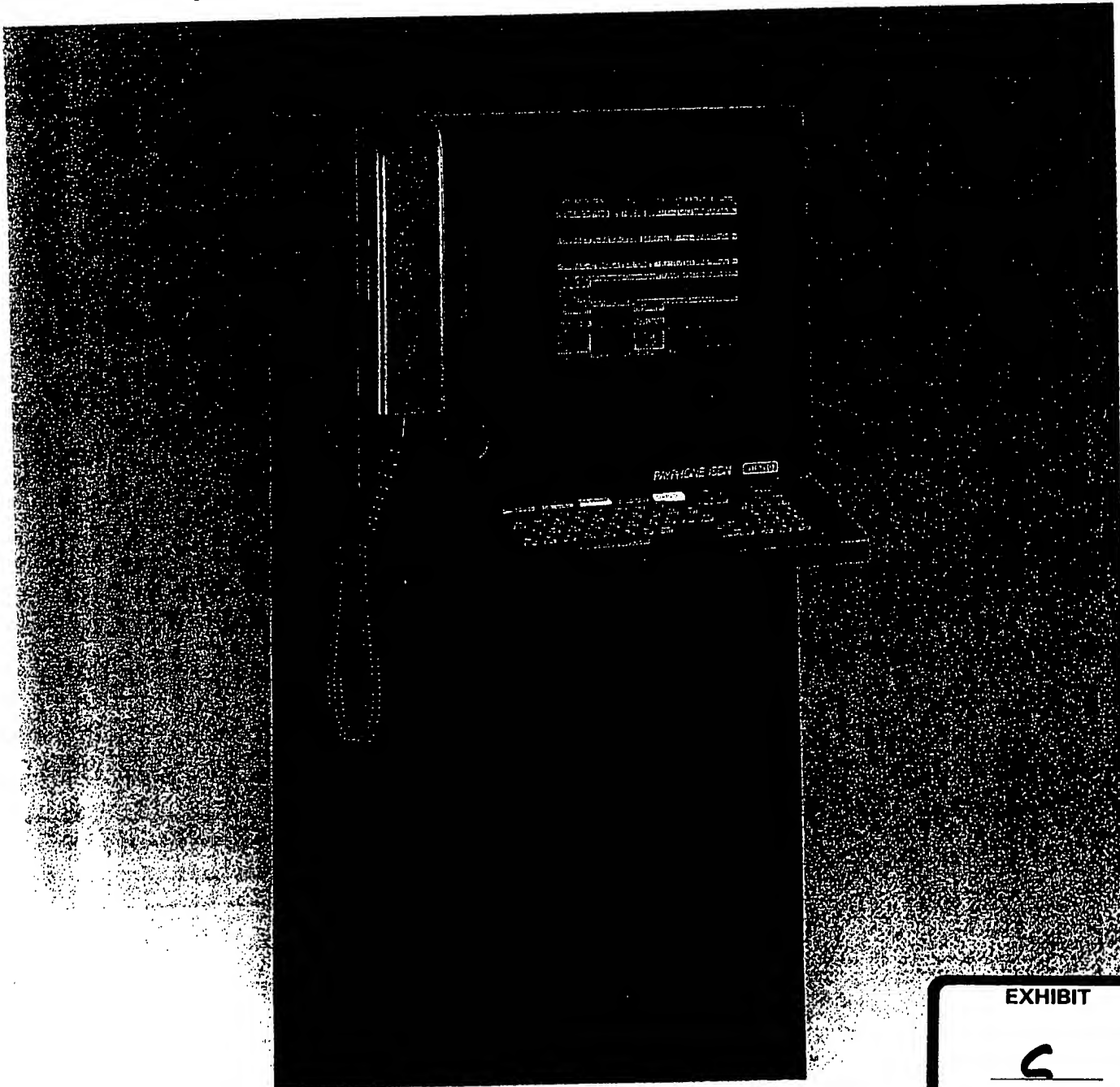
EXHIBIT
D

- Attachment E

LANDIS & GYR

ISDN console

Public telephone and telematic console

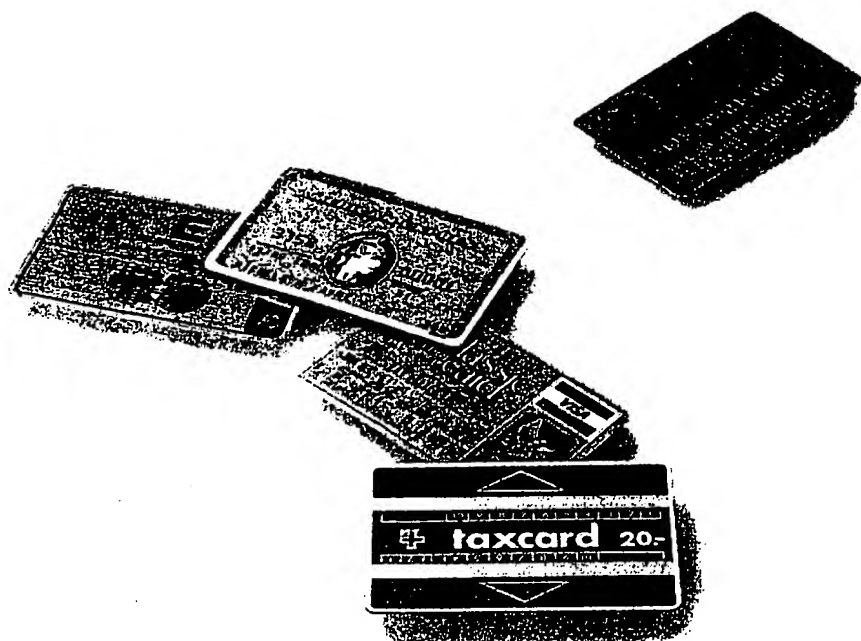


EXHIBIT

C

ALL-STATE® INTERNATIONAL

Attachment F -



- Access to various new services and information sources
- Possibility of accessing a system operator specific data base
- Practical means of payment by means of cards
- Possibility of connecting a portable computer

Motivated by its policy of continuous innovation in telephone equipment, Landis & Gyr presents an advanced public telephone and telematic console, which illustrates the extensive range of services offered and whose role is to promote modern means of communication in crowded public places.

The Landis & Gyr ISDN console enables the public to obtain access to the usual services and sources of information and to new services, all via the same terminal.

Means of payment

Any of the main types of cards currently in use may be employed, namely:

- The Landis & Gyr optically coded prepaid value card,
- The «smartcard» (card with microprocessor chip) or
- The commercial magnetic credit card

For administration of calls made on credit, the Landis & Gyr console connects itself to a specific centralized system, in particular for the phases of authorization and, at the end of the session, for the collection of the relevant data.

Multiplicity of services offered

New services are offered to the user:

- Consultation of Videotex type data bases on the colour screen
- Possibility of connecting a portable personal computer to the telematic console by means of a special infra-red connector, thus providing the possibility of accessing specialized data networks.
- Increased help for the user by the display of instructions and menus on the screen, presented interactively and clear identification of the selections by means of special coloured keys.
- Digital telephone, providing a quality that is superior to that of a conventional analogue telephone together with a shorter time for putting the call through.

Videotex

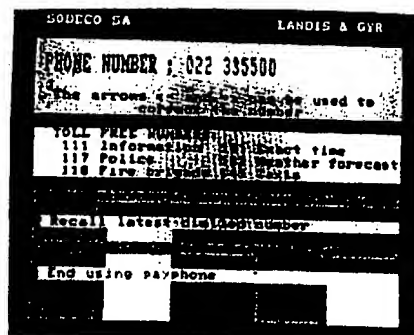
The user has no difficulty in accessing the Videotex services available to the general public (also called Minitel, Prestel and Bildschirmtext, depending on the country).

These services are selected by means of instructions entered via the keyboard using a syntax determined by well defined rules and the requested data are presented in the form of full pages in colour.

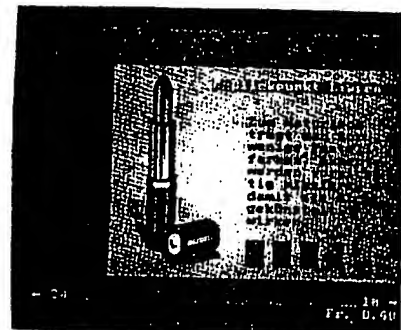
The various services already available include:

- Electronic telephone directory
- Electronic mailbox
- Telex transmission

- Timetables of means of transport
- Reservation of seats with certain airlines
- Reservation of hotel rooms, hire cars, places for cultural and sporting events
- Teleshopping
- Telebanking



Main menu — a colour is attributed to each choice; pressing the key of the same colour on the keyboard causes selection of the desired function



The Videotex standard enables pages with a high degree of graphics to be created.



Data base specific to the system operator

In addition to the Videotex data base, the user also has access to a specific data base, restricted to the users of Landis & Gyr ISDN consoles. This private data base, when it is installed, offers services restricted to a definite geographic region,

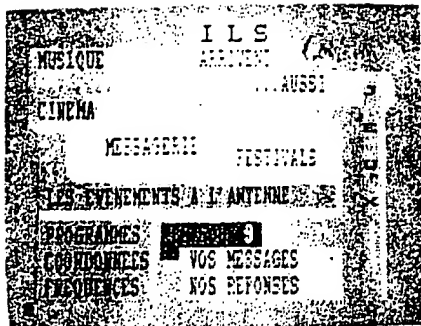
for example: nearest chemists, street directory, proposed route to reach a given address, nearest bus stops, etc.

An easily used source of local information is thus available to travellers and tourists.

Use of a portable personal computer

The Landis & Gyr ISDN console makes it possible to link up to a computer centre from a public place.

The services accessible from a portable personal computer are those that are currently accessible via the specialized data networks, termed packet switching networks or type X.25 networks.



Page for accessing the Videotex server of a local radio station

These services may be classified in two categories:

- Link up to a private central computer and use of the portable terminal as a remote terminal to transfer data or carry out any other operation on the central computer (e. g. transfer of the orders obtained during the day, from the memory of a commercial traveller's portable computer to the central computer of the company).
- Connection to value-added services available on host computers (e. g. private electronic mailboxes, reference library data banks).

Profitability

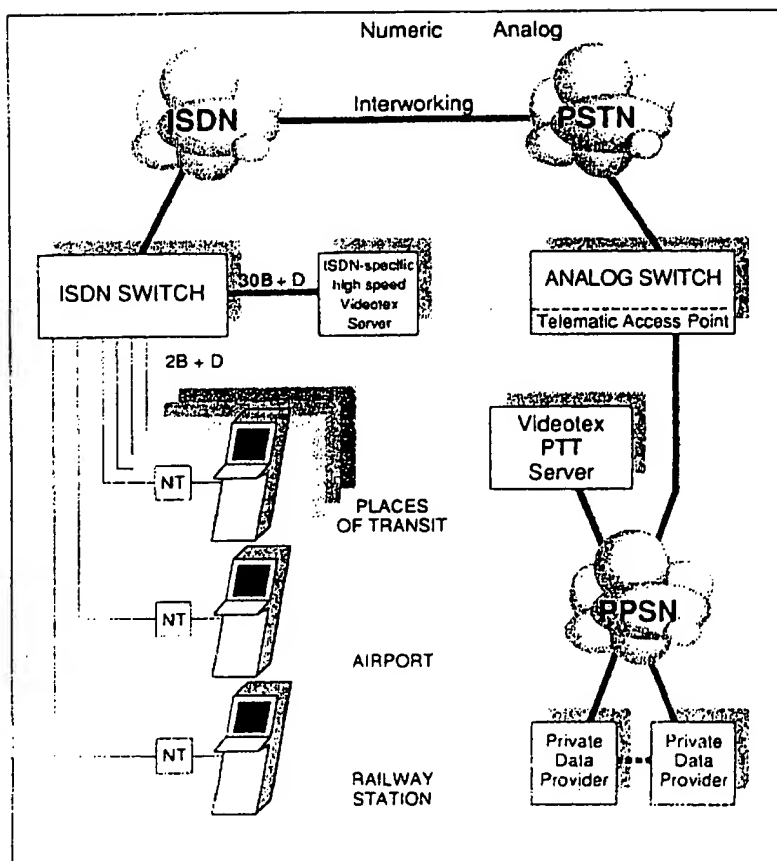
The operator of a system of Landis & Gyr ISDN consoles has considerable scope for making the investment profitable within a very short time:

- He may make a "private" data base service available to the public on a payment basis (value added service).
- He may also use the screen of the ISDN console for advertising purposes. It should be noted that when the screen of the Landis & Gyr ISDN console is not in use, which is the case in particular if the user is only making a voice communication, the operator may cause pages of advertising matter to scroll past on the screen. These advertising pages are generated by

the system operator at a distance and then loaded via the network. They may include a high proportion of graphics so as to achieve maximum visual impact.

Maintenance

Landis & Gyr has applied the concept of remote maintenance to its ISDN consoles. This concept has already proved its value in the range of conventional telephone stations (BTG Remote Management Systems).



ISC

Put

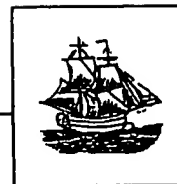


**Technical characteristics of
the Landis & Gyr ISDN console**

- Access to the ISDN S bus, with possibility of use in a multi-point configuration
- Management of communication protocol on ISDN channel D (LAP-D and Layer 3, according to I.441 and I.451)
- During transmission of data on channel B, use of the X.25 protocol (LAP-B, Layer 3 X.25)
- Access to non-ISDN Videotext type information providers, by means of a TA a/b adaptor, installed as an option
- Once the possibility of user data transfer on channel D is provided, this service will be made available, in particular for administration of calls made on credit.
- Access to certain additional ISDN services, such as call back, multi-party conference calls, provided these services are available on the network.
- Multiple means of payment:
Landis & Gyr prepaid value cards
Cards incorporating a microprocessor chip («Smartcards»)
Magnetic commercial credit cards
- Installation on semi-protected public sites
- Overall dimensions: 49×36×130 cm
- 9" colour screen
- Supplied from the mains

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LANDIS & GYR



THE INTERNET NAVIGATOR

SECOND EDITION

Paul Gilster

SCIENTIFIC & TECHNICAL
INFORMATION CENTER

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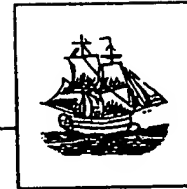
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The Internet Defined

The Internet is a vast, sprawling network that reaches into computer sites worldwide. By its very nature, this interlinked web of networks defies attempts at quantification. Some sources cite Internet penetration into over one hundred countries, with twenty thousand separate networks feeding into it containing more than 2.5 million host computers and twenty million users.¹ Other sources give higher user figures, citing fifteen million people in the United States and twenty-five million worldwide who have used the Internet.² Indeed, estimates about the Internet's growth are proliferating almost as fast as new host computers on the network.

Consider that by 1985, approximately one hundred networks formed the Internet. By 1989, that number had risen to five hundred. The Network Information Center of the Defense Data Network found 2,218 networks connected as of January 1990. By June 1991, the National Science Foundation Network Information Center pegged it at close to four thousand, and, as we've seen, connections have more than quadrupled since then. If we extrapolate based on current numbers, the Internet could reach forty million people by 1995, one hundred million by 1998. Its current growth rate is 100 percent yearly.

Couple that information with an estimated 120–150 million personal computers in use worldwide and you've created a situation with dramatic possibilities. Few of the desktop computers in the average home, for example, are networked together. But many home and business computer users would like to access the Internet's rich resources. The solution: a modem and a dial-up account.

Until recently, it was difficult to access the Internet on a dial-up basis, but the increase in Internet service providers has improved that situation. In the past year and a half, estimates John Eldredge of Performance Systems International, a major service provider in Reston, VA, the number of individuals connecting to the Internet by dial-up has increased from 50 to 80 percent.³ And

commercial providers such as CompuServe, GENie, and Prodigy have all made Internet mail access available. DELPHI and BIX have full Internet connections with access to all major services. Demand is intense. "We've seen an incredible response to our offering of full Internet services," says DELPHI general manager Rusty Williams. "It's been well received by current members and by other people looking for Internet service options—people in business, students, researchers, families."⁴ UNIX-based service providers tell much the same story of growth in the individual user market.

A BRIEF HISTORY OF THE INTERNET

The Internet's beginnings gave no hint that it would evolve into a publicly accessible network. Like many other great ideas, the "network of networks" grew out of a project that began with far different intent: a network called ARPANET, designed and developed in 1969 by Bolt, Beranek, and Newman under contract to the Advanced Research Projects Agency of the U.S. Department of Defense (ARPA).

The ARPANET was a network connecting university, military, and defense contractors; it was established to aid researchers in the process of sharing information, and not coincidentally to study how communications could be maintained in the event of nuclear attack. From humble beginnings—the ARPANET's founders originally contemplated letting only researchers log on and run programs on remote computers—the network grew. They soon added file transfer capabilities, electronic mail, and mailing lists to keep people interested in common subjects in communication.

But even as the ARPANET grew, other networks were under development, and it became clear that new methods of communicating would be necessary. As early as 1973, in an era of mainframe computing a decade before the desktop PC revolution took hold, ARPA, under its new acronym DARPA (Defense Advanced Project Agency)⁵ began a program called the Internetting Project. The goal was to determine how to link networks. Central to this concept of "internetting" is the need to overcome the different methods each network uses to move its information. When properly implemented, so-called *gateways* can be used to connect networks, passing traffic seamlessly from one to the other.

Finding the Right Protocol

Making internetwork links work requires the right protocol. In computer parlance, a *protocol* is simply a set of conventions that determines how data will be exchanged between different programs. Protocols specify how a network is to move messages and handle errors; using them allows the creation of standards separate from a particular hardware system. DECnet, for example, is a protocol used by networks running Digital Equipment Corporation computers; Novell, a familiar name in office networking, is another example of a protocol standard that allows computers to work together. Everything from the speed of the communicated data to the addressing schemes used to move individual message traffic is factored in the protocols used by a given network.

The Internet uses a protocol called *TCP/IP*, which stands for *Transmission Control Protocol/Internet Protocol*. IP is responsible for network addressing, while TCP ensures that messages are delivered to the correct location. These

powerful protocols were developed in 1974 by Robert Kahn, a major figure in ARPANET development, and now president of the Corporation for National Research Initiatives (CNRI), and computer scientist Vinton G. Cerf, now president of the Internet Society and vice-president of CNRI. Their pioneering work created the mechanisms by which the Internet could appear. In fact, if we are looking for a quick definition of the Internet, we can simply say that it is a network of networks that run the TCP/IP protocol suite.

If you will fall into the habit of thinking of the Internet as a metanetwork—a network made up of interconnecting networks—you will grasp the dispersed, decentralized nature of this enterprise. Around the world, connecting through special computers called *routers* and *hubs*, computers from different manufacturers running a whole range of operating systems can communicate with each other. Digital Equipment Corporation minicomputers can talk to Sun Microsystems workstations. Standalone PCs and Macintoshes can talk to Intel machines on office networks; they, in turn, can reach large-scale regional networks, which connect their high-speed circuits over a grid called a *backbone*.

You should realize that TCP/IP is not the only protocol for connecting a variety of different networks. The Internet is actually becoming a multiprotocol network, integrating other standards into its operations. Chief among these is *Open Systems Interconnection*, or *OSI*. Developed by the International Organization for Standardization (ISO), OSI has been widely embraced in Europe, where the momentum of TCP/IP has been less overwhelming than in the United States. Systems using other protocols likewise connect through gateways to the Internet; BITNET, for example, is a network that communicates using its own standards, but which is at least partially accessible to the Internet through such linkages. And the UNIX-to-UNIX Copy Program (UUCP) network connects thousands of computers by dial-up telephone lines; its electronic mail destinations are likewise available to the Internet user.

THE INTERNET VS. COMMERCIAL ONLINE SERVICES

Commercial on-line services like GENIE and DELPHI take an entirely different approach to distributing information. If you have been a user of one or more of these systems and now want to dial into the Internet, you must master the differences between the two models. CompuServe, for example, manages its huge user base through a centralized set of computers. When you call into local telephone numbers around the world to gain access to the system, you are connecting ultimately to a centralized set of resources. More telling is the fact that the commercial operation is managed from the top as a business. There is a company behind CompuServe, just as there is behind BIX and DELPHI.

Not so with the Internet, which has grown up free of both the advantages and problems caused by management from the top. This is why, when you connect to the Internet, you must choose from among a wide range of service options (we examine these in the next chapter). No central sign-up facility exists for the Internet; rather, you make contact with a service provider who allows you to gain access to the network through local computers. The consequences of this decentralization on network resources are likewise strong. What you find on the Internet depends on the decisions of thousands of system administrators around the world. No single company has made an

overall decision about network design, which makes mastering the search tools we will examine later a critical part of your explorations.

What Is Packet Switching?

Consider the great problem of networking diverse computer systems. You would like to move a stream of data from one computer across a communications link to others. How does the data get there, and how can we ensure that when it does so, it arrives in precisely the condition it was when it left? Can we be sure that our addressing scheme works, and that, in the event of a network failure, our data will be rerouted so that it reaches its destination? These are problems that network protocols must address. The Internet uses a scheme called *packet switching* to solve them.

Packet switching takes data and breaks it into parts, giving each segment a header with the necessary routing information. Computers on the network examine these headers and move the data packet along to the next site. Each time, the packet gets closer to its destination. A major bonus of packet switching is that the computers routing this data can select alternate routes when a given link fails (remember, this system was developed by researchers who were considering how to ensure reliable communications when parts of the network were destroyed in a nuclear conflagration). Another bonus: The computers at either end of a packet network connection can operate at different speeds; the network itself acts as a buffer to adjust for the difference.

You may also have run across the term *circuit switching*. Think of one-to-one contact here. If you set up a data session between two computers using ordinary telephone lines, placing a call whenever you need to move data, you would be using circuit switching. The method is useful when you need to connect computers to transfer large amounts of information. But because it requires you to set up a circuit dedicated to an exclusive use each time you use it, circuit switching is unable to handle the massive amounts of diverse data carried by the Internet. Complex applications requiring contact with multiple computers must rely on the packet switching model.

The Internet Emerges

In 1993, the U.S. Defense Communications Agency mandated TCP/IP for all ARPANET hosts. In doing so, it established a standard by which the Internet could grow. From this point forward, it would be possible to add more gateways, connecting more networks, while the original core networks remained intact. Most people date the true arrival of the Internet at 1983, the year when the original ARPANET was split into MILNET—to be used for military communications—and the ARPANET—for continuing research into networking. But, as early as 1980,⁶ CSNET, a network linking computer science departments in several states, became the first autonomous network DARPA allowed to connect to the ARPANET.

CSNET eventually merged with BITNET in 1989. The ARPANET itself was decommissioned in June 1990, its functions absorbed into the broader structure of the Internet. But the two networks had established a workable principle: let networks communicate by a set of protocols, with new networks being added to an ever-growing metanetwork communicating through gateways. That principle

depths of the world's fastest supercomputers to 1200 bps dial-up modems moving electronic mail traffic into some of the world's poorest countries. Clearly, a directory of all its constituent networks would be a massive volume which would quickly pass out of date. Users interested in tracking down network structure will, however, be interested in Tracy L. LaQuey's *The User's Directory of Computer Networks* (Digital Press, 1990) as well as John S. Quarterman's *The Matrix* (Digital Press, 1990); both are excellent starting points. And anyone seriously attempting to monitor network growth will learn that an active on-line presence is critical.

The Big Three Internet Applications

As Douglas Comer points out in his *Internetworking with TCP/IP. Vol 1: Principles, Protocols, and Architecture*, what you as an end user see of the TCP/IP protocols is a set of application programs that enable you to use the network to good advantage.¹² You and I don't need to know the intricacies of how TCP/IP functions, though if you're curious, there's no better or more respected guide than Comer's work. But running the programs themselves is not difficult, as we'll see.

Users of dial-up computer services, like users of bulletin board systems (BBS) and commercial on-line services, have come to expect certain capabilities from their providers, which the Internet provides in its own way through TCP/IP.

Here is how the Internet delivers these basic functions.

ELECTRONIC MAIL

Electronic mail is the most elementary service, and for many users, the most useful. Many people on the Internet have used nothing but electronic mail and still find the network indispensable. You can send messages to one or more people, deliver text files, retrieve information by automated computer programs like LISTSERV (through a gateway to BITNET), and more. While access to all three of the major Internet services is vastly preferable, it's possible to do quite a lot with electronic mail alone. A good thing, too, for aside from DELPHI and BIX, the only major on-line services with a full-fledged Internet connection, there is only limited access to the Internet from the other commercial services. That means, as we'll see in Chapter 3, you have three choices:

1. Learn to use the Internet through mail alone (Chapter 8 shows you how much you can do with such a connection).
2. Use DELPHI or BIX's full-service connection.
3. Get an account with one of the full-service dial-up providers discussed in Chapter 3 (more on these options there).

Ironically, in the early days of the ARPANET, electronic mail was considered an insignificant add-in to network capabilities. No one anticipated the high volume of traffic that began to flow as scientists exchanged ideas with geographically distant colleagues. Today electronic mail is taken for granted, from small companies with office networks to giant corporations linking remote offices worldwide. Its growth has been just as strong on the commercial networks, many of whose members maintain accounts solely for the e-mail connectivity they provide.

FILE TRANSFER

Moving files between computers is one of the handiest features of the networking revolution. If you can find something you can use—and if it's made publicly available, as are thousands of computer files on the Internet—you can transfer it to your computer. The process is called *file transfer protocol*, or FTP. You access documents made available to the public through a procedure called *anonymous FTP*. This procedure allows you to log on to remote computers and use the resources in directories the administrators have made available to the public. Anonymous FTP will be a major tool as we retrieve files and build an Internet library later in this book.

With FTP procedures, the Internet gets challenging indeed. Instead of consulting a single library source, as on CompuServe or GENie, for a catalog of files, you are faced with thousands of computer sites offering programs and text files. To track down the program you need easily, you should learn about the access tools we'll discuss later. With them, you can locate programs, then use FTP to move them from the source computer to your service provider's computer at high speed, and subsequently download them to your own machine.

REMOTE LOGIN

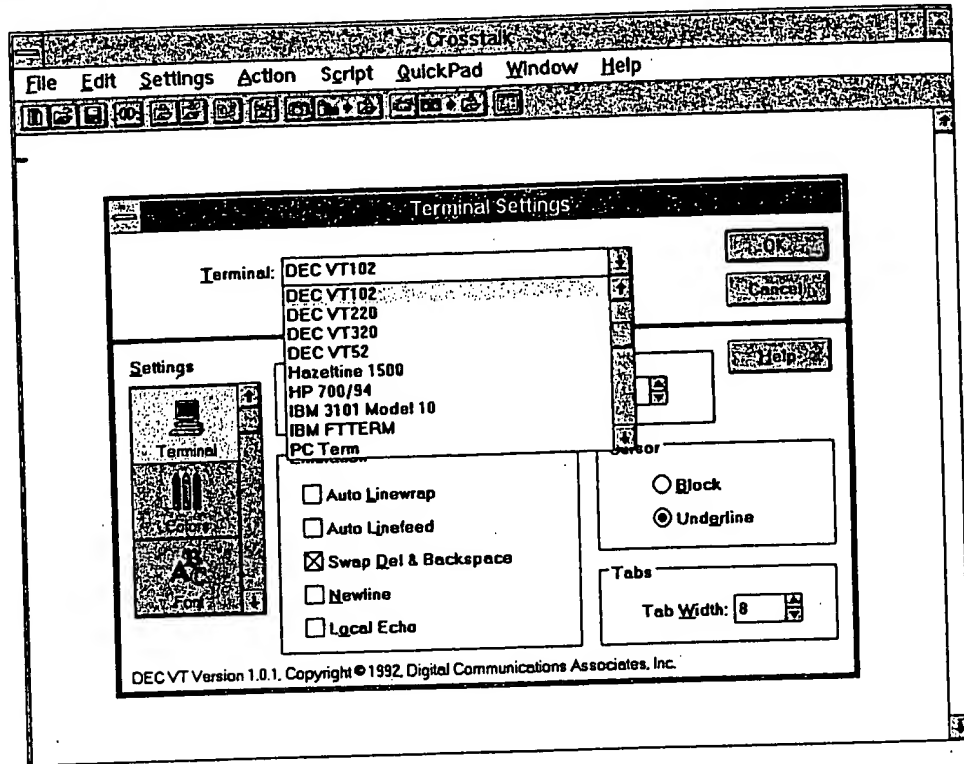
Remote login, otherwise known as Telnet, provides the ability to connect to a remote computer and work with it on an interactive basis. Again, the Internet opens the doors to a worldwide computing environment, on many of whose connected machines are services, databases, and other resources that can be examined and manipulated. By using Telnet, you can log onto the library catalogs of distant universities, look for information about everything from the formation of distant galaxies to recipes for potato soup, and examine Supreme Court decisions or the lyrics of popular songs. All the while, your computer will act as a terminal of the remote computer, which will respond to your command. In many cases, menu-driven systems at the other end make interactive sessions intuitive, but some systems are considerably easier to work with than others.

Note that when the network called "the Internet" is referred to in print, it always has a capital I. But you may also see abundant references, if you prowl your bookseller's shelves for computer books or read the computer press, to general terms such as "internets," "internetting," and "internetworking." Remember that TCP/IP can pass information among computers that aren't on *the* Internet. Your company, for example, might have local area networks in a number of sites. At some point, it would make sense for management to link those LANs together. One way of linking them is through TCP/IP. Your company would have established an *internet*, but you're not on *the Internet* unless you decide to be.

Public Packet Switching Networks

We have already discussed packet switching, and how it breaks messages into segments, each of which contains the necessary addressing information to ensure safe delivery. The ARPANET was the first major packet-switched network, running on an experimental basis for the use of DARPA contractors and not open to the general public. But as a dial-up modem user, you have probably encountered another form of packet switching, as used by networks like BT Tymnet or SprintNet. These public networks allow you to contact distant computers with a local telephone call; they then route your computer traffic to the appropriate destination.

Figure 3.1
Crosstalk for
Windows, terminal
emulation choices
from the Settings menu.



SIGNING ON—A PERSONAL ODYSSEY

Commercial access to the Internet has improved so dramatically in the past two years that newcomers will be startled to learn that there was a time when the process was excruciating, although many early treatments of the subject made it sound like a snap. "Need access? Just ask your system administrator," they blithely said, assuming you wouldn't ask if you weren't already working on a network in the first place. And indeed, if you were already on a network, the advice was sound. Many people to this day don't realize they can connect through their work site and that, in such cases, a simple request is usually enough to get them up and running.

But it was a different story for anyone who was trying to log on by modem from a standalone computer. For me, logging on to the Internet became something of a crusade, deepening into obsession as I continued to run into a stone wall. Several years ago, I made the mistake of asking this question: "I work out of a home office. I don't have Internet access and I don't have a system administrator. What do I do?" I asked people in my area and looked for answers on various on-line services. I peppered local bulletin boards for advice and called computer gurus in Research Triangle Park, pestering some poor souls for months.

The result? "Try the universities," some said. I called Duke, UNC, North Carolina State; access there was restricted and no one I spoke with knew how to get it. Maybe if I was a student. Unfortunately, my years at UNC had ended in the mid-1970s. "Call some of the big corporations," I was told. "Someone out there might be able to get you an account." I didn't know what I was doing, but

I began to make these calls. Most people didn't know what I was talking about. Those who did seemed incredulous that I would ask. "Network connections are private," they said.

Network connections private? If that doesn't give you something to think about, what does?

The Internet is not CompuServe or Prodigy. Lacking any central organization, the network has no billing address. You can't make a phone call to a network office and say, "Sign me up." You'll also get confused by the plethora of possibilities some of the people who are already on the network will tell you about. "Do you want a full connection?" they'll ask, and you reply, "Sure," not understanding why you would want anything else. "The best we can do is SLIP," you may hear. SLIP? What does it mean? And why do these people I'm talking to have nothing better to offer? Is SLIP some kind of restricted access?

It wouldn't be until CONCERT-CONNECT came along that I made my real plunge into the Internet. CONCERT-CONNECT was a service provider which, among other options, made possible local dial-up access to the Internet. It brought order into the North Carolina Internet scene by offering a flat rate per month, allowing you to log on to the computers at MCNC (formerly the Microelectronics Center of North Carolina, now known solely by its acronym, as are many computer organizations). The flat rate was attractive, as were the services; not just USENET newsgroups, but FTP and Telnet as well; not just electronic mail, but the whole panoply of features that make the Internet so fascinating.

Today, CONCERT-CONNECT is gone. In its place are a growing number of Internet service providers, each offering dial-up access. Many also offer more advanced forms of network connection, including the aforementioned SLIP (which we'll discuss in this chapter), and other forms of direct links all the way up to high-speed dedicated T1 and T3 lines. My new service provider is Interpath, a division of Capitol Broadcasting Corp., here in Raleigh. Interpath is representative of the new breed of service provider, offering network connections to a great variety of customers from individual home users to the largest businesses.

What a change. In every state, service providers are springing up; indeed, Internet access is becoming a growth industry, bidding fair to create a price war that will be followed by an inevitable period of consolidation. For you, the individual or small business user, the good news is that prices are dropping across the board. CONCERT-CONNECT once charged \$175 per month for SLIP access; Interpath is now offering comparable service for \$37.50, and regular dial-up access is cheaper still. If it's a full-service access provider you're looking for, finding one will keep getting easier. No provider in your area? There will be soon.

Even more options are appearing from the ranks of the commercial on-line services like CompuServe and DELPHI. In fact, all of the major on-line services now offer some form of Internet connectivity, even if only a gateway that allows you to send and receive mail to and from the Internet. DELPHI and BIX have moved aggressively to open full-access provisions. America Online is beginning to widen its existing mail-only gateway with a host of new services including USENET newsgroups and access to the superb Internet interface and display tool called **Gopher**. Watch for announcements from the other commercial services; Internet access is now the hottest ticket in town as the networks grow together into a true global matrix.

We will work our way up the access ladder to show you what options are available. If you are already on the Internet, you won't need to read the following



Electronic Mail as a Gateway to the Internet

File Transfer Protocol and electronic mail are both key components of Internet connectivity, but what do you do if you only have an Internet mail connection? After all, with the exception of DELPHI, BIX, and America Online, the major commercial on-line services offer only mail connectivity. Fortunately, your on-line mailbox with a commercial provider like CompuServe or GENie can become a true gateway into the Internet. You won't be able to accomplish everything—in particular, Telnet simply can't be managed by mail alone—but if you are looking for files, you'll be pleased to know you can use electronic mail to retrieve them, without needing to employ FTP procedures yourself.

This chapter is devoted to people with accounts on the CompuServes and GENies of this world. Let's be clear on this: The optimum connection for a dial-up user is a full-access account with an Internet service provider, because it gives you the ability to use all three key Internet protocols—e-mail, FTP, and Telnet. But maybe you're hoping to shop around on the Internet first, to see what's available. Or perhaps you use CompuServe daily and would like to streamline your operations, running everything through your account there. Whatever the case, if you need to transfer files by mail, you can do it. The solution is workable, and while it's not exactly elegant, it does what you want it to do.



What You Need A Background Document on Internet Faxing

The Document FAQ: How Can I Send a Fax from the Internet?

How to Get It The document is posted regularly on the USENET news groups: `alt.internet.services`, `alt.online-service`, `alt.bbs.internet`, `alt.answers`, and `news.answers`. You can also receive new editions automatically by sending mail to this address: `saveitz@rahul.net`, asking to be added to the distribution list.

FINGER BY MAIL

finger is a program we discuss in Chapter 14 which allows you to retrieve information about users and, in some cases, about a wide variety of information such as earthquake updates or popular music. Normally, **finger** is run as a program on your UNIX service provider's computer. However, you can also use electronic mail to send and retrieve the results of **finger** queries. To do so, send e-mail to:

`b.liddicott@ic.ac.uk`

In the **Subject:** field, put this command: `#finger user@site` where `user@site` is the address you want to reach. You will find a list of potential **finger** sites in Chapter 15's directory.

Suppose, for example, that you want to retrieve NASA headline news. The address is `nasanews@space.mit.edu`. Your e-mail request would then read:

`#finger nasanews@space.mit.edu`

placed in the **Subject:** field of the message. Sending this, you will shortly receive an update on NASA press releases.

SENDING ELECTRONIC MAIL TO OTHER NETWORKS

If you have any doubts that Internet electronic mail opens out to networks across the world, consider the evidence of John J. Chew's *The Inter-Network Mail Guide*, available on the Internet both as a posting in various USENET newsgroups and also by download with anonymous FTP. Chew tracks the ways in which the various commercial providers maintain links to and from the Internet, and his list is growing with each new posting. A glance through it reveals linkages to such varied providers as Geonet Mailbox Systems, BIX, GreenNet, KeyLink, PeaceNet, SprintMail, and AppleLink, to name literally but a few. Chew's list will come in handy, and I advise you to get a copy.

Now you will learn how to send mail from the Internet to addresses at the major on-line services.



What You Need: A List of Network Interconnections

The Document: **Inter-Network Mail Guide**, by John Chew

How to Get It: Through anonymous FTP to **ftp.msstate.edu**. The directory is **pub/docs**. The file name is **internetwork-mail-guide**. You can also keep up with changes to this document by monitoring the USENET news groups **comp.mail.misc** and **news.newusers.questions**.

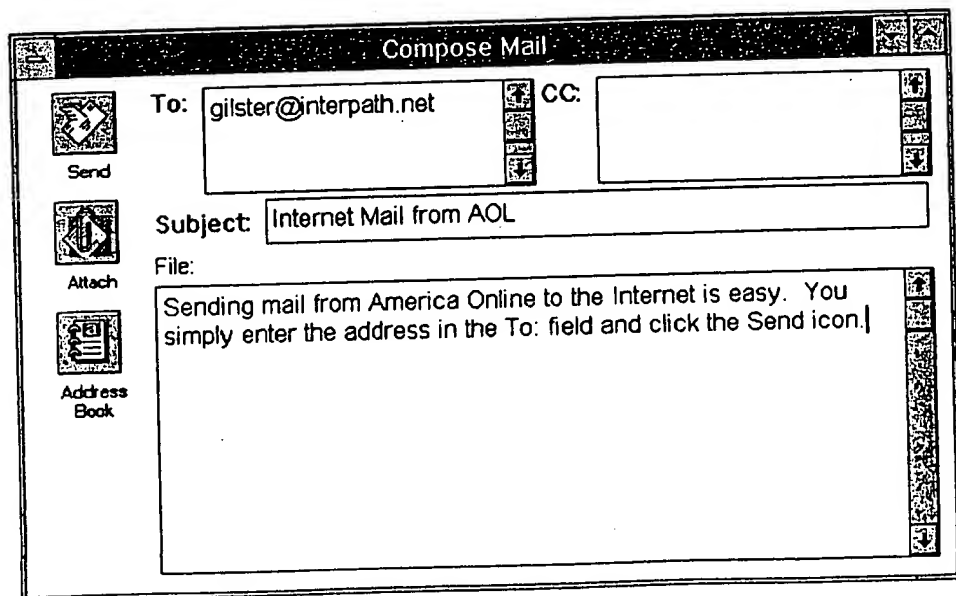
America Online

To send mail from the Internet to America Online, the syntax is **username@aol.com**. The user name should be all lowercase, with spaces removed.

Outgoing messages cannot be any longer than 32k. On the PC version of America Online, incoming mail cannot be any longer than 8k, which effectively prevents your using this service for **ftpmail** file transfers. On the Mac version of America Online, as well as the Apple II version and PC-Link, incoming mail cannot be any longer than 27k. All characters except newline and printable ASCII characters are mapped to spaces. Users are limited to seventy-five pieces of Internet mail in their mailbox at a time.

To send mail from America Online to the Internet, simply enter the Internet address and write your message. Figure 8.19 shows the process in action.

Figure 8.19
Sending a message to
the Internet from
America Online.



BIX

To send mail from the Internet to BIX, the syntax is *username@bix.com*. To send mail from BIX to the Internet, enter the Internet address preceded by *to* at the **Mail:** prompt. The following is an example of a message being sent from BIX to the Internet:

```
Mail:to gilster@interpath.net
Enter subject: Mailing from BIX
Enter text. End with '. <CL>
```

This message is to test BIX's connections to Internet e-mail.

```
send/action:send
Sending..Memo 76679 sent
```

There are no size restrictions on BIX messages to and from the Internet, and no monthly or per-message fee for Internet mail. You can move up to 10MB per calendar month (in both directions, to and from the Internet), without any additional charges. Beyond that, the charge is \$1.00 per 100k transferred. Messages can be up to 0.5MB in length in either direction; longer messages may be truncated.

CompuServe

To send mail from the Internet to CompuServe, the syntax is *usernumber@compuserve.com*. CompuServe user numbers contain commas, which must be changed to periods when you send from the Internet. Thus 12345,6789 becomes 12345.6789. To send me a CompuServe message, for example, you'd send to *73537.656@compuserve.com*.

To send mail from CompuServe to the Internet, as just shown, lead off the address with **>INTERNET:** Sending a message to **ftpmail**, then, requires the address:

```
>INTERNET:ftpmail@decwrl.dec.com
```

DELPHI

To send mail from the Internet to DELPHI, the syntax is: *username@delphi.com*. To send mail from DELPHI to the Internet, use the word **internet** followed by the recipient's name (with no spaces in between) enclosed in quotes. On DELPHI, to send a message to **ftpmail**, for example, you would address it to **internet"ftpmail@decwrl.dec.com"**. The following is a sample message from Delphi to the Internet:

```
MAIL send
To:      internet"gilster@interpath.net"
Subj:    Test Message
Enter your message below. Press CTRL/Z when complete, or CTRL/C to quit:
Checking the DELPHI connection to the Internet.
^Z
```

GEnie

To send mail from the Internet to GEnie, the syntax is `username@genie.geis.com`. To send mail from GEnie to the Internet: After entering the Internet address, you are prompted for additional GEnie addresses, copies, and a subject line. You can then enter your text. Figure 8.20 shows a GEnie message to an address on the Internet as it is being composed. GEnie's Internet mail services cost \$3.00 per hour.

MCI Mail

To send mail from the Internet to MCI Mail, the syntax is: `username@mci-mail.com`. MCI user names should have spaces removed. Thus Sam Spade becomes `Sam_Spade@mcimail.com`. Conversely, it's possible to use an MCI user number. If Sam's number is 123-4567, simply remove the dash. Thus `1234567@mcimail.com`. If there happens to be more than one Sam Spade in the MCI directory, you can reach the desired party by sending to:²

`Sam_Spade/1234567@mcimail.com`

To send mail from MCI Mail to the Internet, use the EMS option. Here's how to do it:

- At the TO prompt, type recipient's name and the word EMS in parentheses.
- At the EMS prompt, type **INTERNET**.
- At the MBX prompt, type the recipient's Internet address. Note: If the Internet address exceeds eighty characters in length, you must split the

Figure 8.20
Sending a message to
the Internet from
GEnie.

Enter Destination GEnie Address or C/R to continue.
?

Would you like to receive a copy of the message? (y/n) ?n

Enter the subject of your Internet message (max 30 characters) or C/R for no subject:
<.....>
?Mailing from GEnie

When you see the prompt, 1>, enter your message.
When you have finished entering your text, use the "S."
to send the Internet message. Use "X" to exit without sending.

Enter Internet text:

Queue#	Item	From	Length	Sent	Subject
1	6239343	GENIE.MGMT	268	93/05/27	New Pricing Effective July 1st

1>GEnie prompts the user through the mail process, so sending mail to
2>the Internet is relatively simple. You will be prompted for additional
3>addresses for your message, asked if you'd like a copy of it, and given
4>space to enter a subject line.

address into multiple MBX lines. The split should occur at one of the following characters: @ ! %.

- Only one Internet mailbox may be used with an individual TO or CC recipient.
- Complete the mailing procedure as usual.

Figure 8.21 shows an example of sending a message to an Internet address from MCI Mail.

Prodigy

Prodigy is the huge commercial service created by IBM and Sears. To send mail from Prodigy to the Internet, you will need a program called Mail Manager. Jump to *About Mail Manager* while on-line to learn how to download it.

To send mail from the Internet to Prodigy, use the Prodigy user ID followed by the domain name. Thus, to send mail to **klbc98x**, you should address the message to **klbc98x@prodigy.com**.

MAILING LISTS AND ELECTRONIC JOURNALS

A huge variety of mailing lists is available to people with electronic mail access to the Internet. So much is available here that it would make little sense

Figure 8.21
Sending a message to
the Internet from MCI
Mail.

```

EMS:      INTERNET
          EMS    376-5414 INTERNET                      NRI          Reston

Enter recipient's mailbox information.

MBX:      mike_banks@bix.com

If additional mailbox lines are not needed press RETURN.

MBX:

TO:       Mike Banks
          EMS:  INTERNET / MCI ID: 376-5414
          MBX:  mike_banks@bix.com

Is this address correct (Yes or No)? y

CC:

Subject:  MCI Mail Check

Text: (Enter text or transmit file. Type / on a line by itself to end.)

Mike:

Please let me know if this message gets through OK.  It's routed to
your BIX account via MCI Mail.

Thanks!

Paul

```

internet

The Magazine for Internet Users ■ Nov/Dec 1994 ■ \$4.95
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CHATTER

• NEWSGROUPS

• VIRTUAL ENCOUNTERS

• DIGITAL RIGHTS

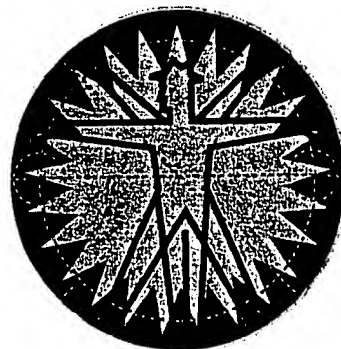
• SUPERNATURAL SITES

CHATTER



Departments

LETTERS TO THE EDITOR	4
FROM THE EDITOR by Michael Neubarth	6
INTERNET NEWS	10
INTERNET BOOKSHELF Edited by David Dean	104
POINTERS	106
INTERNET FORUM	108
INDEX TO ADVERTISERS	112



78

c o n t e n t s

99

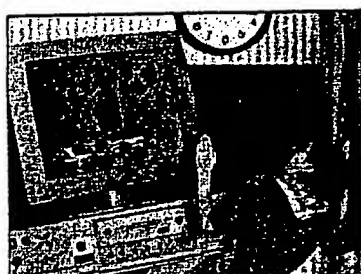


Columns

THE SURFBOARD by Andrew Kantor and Eric Berfin	14
NET PROFITS: Power Rap by Christopher Locke	18
INFO HOUND: Herbs, Ella, and IRC by Dave Taylor	22
ENTRY LEVEL: Learning the Ropes: A Usenet Style Guide by Andrew Kantor	24
DIVING INTO THE INTERNET: Internet: Going South by Joel Snyder	94
FOUND IT ON THE NET: Work or Play? by Linda J. Engelman	96
THE INTERNET CURMUDGEON: Painting the Right Picture by Daniel P. Dern	99
ARTIST AT LARGE: Going Graphical (There's No Place Like Home Page) by Kenny Greenberg	102

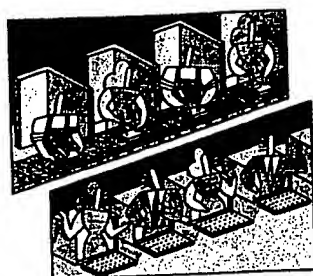
50

86





64



18

Features

USENET: Past, Present, and Future by Dave Taylor	26
SECRETS FROM WITHIN USENET by Kevin Savetz	31
NEWSREADERS: An "n" User's Guide by Robert Sanchez	34
NEWSGROUP CULTURE by Robert Sanchez	38
DOUSING FLAMES by Kristina Harris	42
VIRTUAL ENCOUNTERS by Thomas Barrett & Carol Wallace	45
THE EX FACTOR by Brad Stone	50
GABFEST—INTERNET RELAY CHAT by Aaron Weiss	58
ALL THE NETNEWS THAT FITS Interview with Brad Templeton of ClariNet by Jeff Ubois	64
SERVING ADS by Joseph Raben	70
ANATOMY OF LISTSERV by Karl Signell	76
DIGITAL RIGHTS by Jean Erhard	78
ALIENS AMONG US by Andrew Kantor	82
WHY TEACHERS FEAR THE INTERNET by Crawford Kilian	86
SUPERNATURAL, STRANGE, AND SINISTER by David R. Noack	88

COVER: ILLUSTRATION BY TERRY ALLEN

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Aliens Among Us

A horde of new users from America Online, CompuServe, GEnie, and Prodigy is coming onto the Internet.

By Andrew Kantor

If you listen carefully, you can hear the grinding of gears and the creak of metal. The big guns of the on-line world—America Online, CompuServe, GEnie, and Prodigy—are slowly turning and taking aim at the Internet, and cyberspace will never be the same.

For users of these services, the next few years will see the opening of a doorway (gateway, rather) to a vast and almost uncharted resource. For veterans of the Net, it means an influx of new users (often referred to in a less-than-friendly tone as "clueless newbies") that puts the college September Rush to shame.

There has already been a test case: a virtual sacrifice to the gods of the Net, if you will. America Online (AOL) expanded its Internet services in March 1994, making Usenet Newsgroups accessible to its users. But those users quickly learned the hard way that the Internet did not have an enforced Terms of Service to keep users friendly. They were faced with a barrage of verbal attacks. Their crime? Simply not knowing where to post their messages. But on the Internet, ignorance is never an excuse, and there is no friendly sysop only an instant message away.

Of course, from the Internet users' point of view, thousands of postings from aol.com were suddenly invading the Usenet, often in inappropriate newsgroups. ("Someone searching for family in Oregon should know enough not to post in alt.best.of.internet," says one Usenet veteran.)

America Online learned some valuable lessons that the other services should take to heart before taking the

leap beyond their cloistered walls. The most important? That explaining to users what they're getting into may save them a lot of time and trouble . . . and a good deal of embarrassment.

But AOL is not the only service with Net-related troubles. Prodigy opened a local Internet bulletin board so its users could discuss the global computer network. But somewhere along the line a signal got crossed, and users thought the bulletin board *was* the Internet. Messages to the tune of "Hi, I'm in Nebraska. Is anyone out there?" propagated the board, as more savvy participants tried to explain—with limited success—what was going on. So Internet citizens, fresh from dealing with 650,000 spanking new AOL users, dread the impending flood from Prodigy's and CompuServe's four and a half million total subscribers.

America Online: Act II

Despite some problems with quirky Usenet software (it posted some users' messages up to a dozen times) and untrained users, America Online has weathered the storm, and now is ready for the next step. AOL now offers a Gopher client and limited access to some WAIS databases. FTP and telnet services also are planned, although no date has been set, according to managing editor Kathy Ryan. "We've been driven by what our customers ask for," she said.

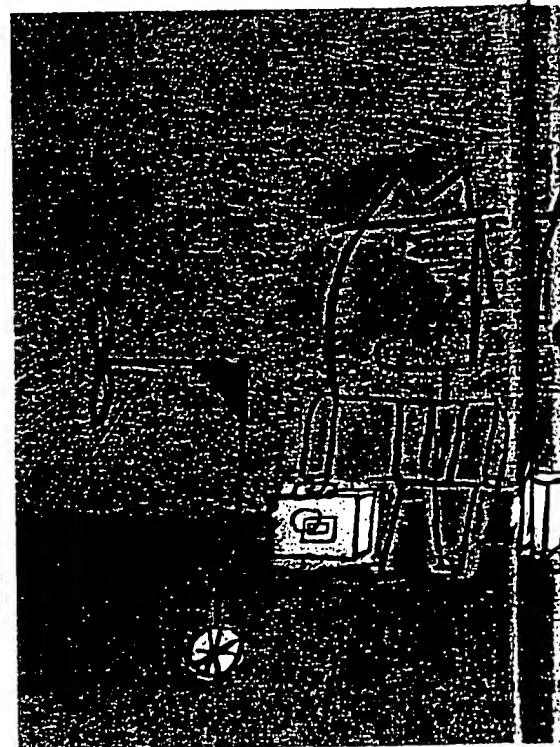
However, AOL's Gopher and WAIS services won't look familiar to veterans of the Internet, and not just because of the graphical look. The two applications have been combined under a single interface: a Gopher-like series of menus that present either text files or other menus. In addition, AOL is limiting the Gopher

information it will make available, and users will only be able to easily access Gopher services that AOL's editors have chosen. Veronica searches also are limited: You cannot choose the server to search. And WAIS searches will not return the relevancy information the system is known for. Thus, AOL's combined Gopher/WAIS offering is a watered-down version of both applications that seems to promise more than it delivers—a charge AOL has faced before.

AOL has been courting partners to increase the services it provides. An alliance with publisher Simon and Schuster, for instance, will allow AOL to offer College Online to provide e-mail and other resources for students and educators as an alternative to the Internet.

Another service being tested is a TCP/IP connection that will enable users to access AOL through an office LAN or via a SLIP or PPP Internet connection. The beta software is only available for

Illustration by James Yang



Macintosh users, and is located at AOL's anonymous FTP site, ftp.aol.com, in the /mac directory. The file is called TCP-for-Mac-AOL-2.1.sea; a README file provides instructions. (AOL's standard Macintosh and Windows software is also available at that site.)

On the Usenet front, complaints about AOL users continue to mount. According to Ryan, "(the reaction) wasn't surprising. When we came onto the Internet, I believe we came on as the single largest site, and we did have some members who didn't understand netiquette." But that's changed now, she says. "I think AOL has done more to educate its users than anyone else." For instance, the service now has unofficial "Net buddies"—Internet-savvy users who monitor Usenet and inform newcomers when they violate netiquette.

America Online's users are not entirely to blame, according to some. AOL software makes it difficult to reply by e-mail (users must post personal follow-ups instead) and users cannot include original message text in their replies. AOL users also must pay \$3.50 per hour to use News because there is no off-line newsreader. That means, as one user puts it, that they must pay to think; the more they think about what they write, the more it costs.

In late August, thanks to an aggressive campaign of giving out free trial

accounts, AOL claimed to have reached the one million subscriber mark, making it slightly less than half the size of CompuServe or Prodigy.

CompuServe: Slow and Steady May Win the Race

While AOL was opening its doors to let its users out, CompuServe's first step was to let its users *in*, by allowing users to telnet to their CompuServe accounts from the Internet. CompuServe can do this for one simple reason: Its service is text-based (although graphical front ends are available) and thus well-suited for use through one of the Internet's typical terminals.

Like the other on-line services, CompuServe has offered an e-mail gateway to the Internet for some time, but it charges for e-mail usage beyond a certain volume: After about 60 free three-page messages each month, users must pay approximately 5¢ for each 1,500 characters they send or receive.

CompuServe recently gave its users access to Usenet News, and provided plenty of warning signs along the way ("This information originates *outside* of CompuServe, and CompuServe therefore claims no responsibility for the content."). However, CompuServe's Usenet software suffers from some of the same problems as America Online's. Most obvious is the inability to automatically insert text from an original message into a follow-up message.

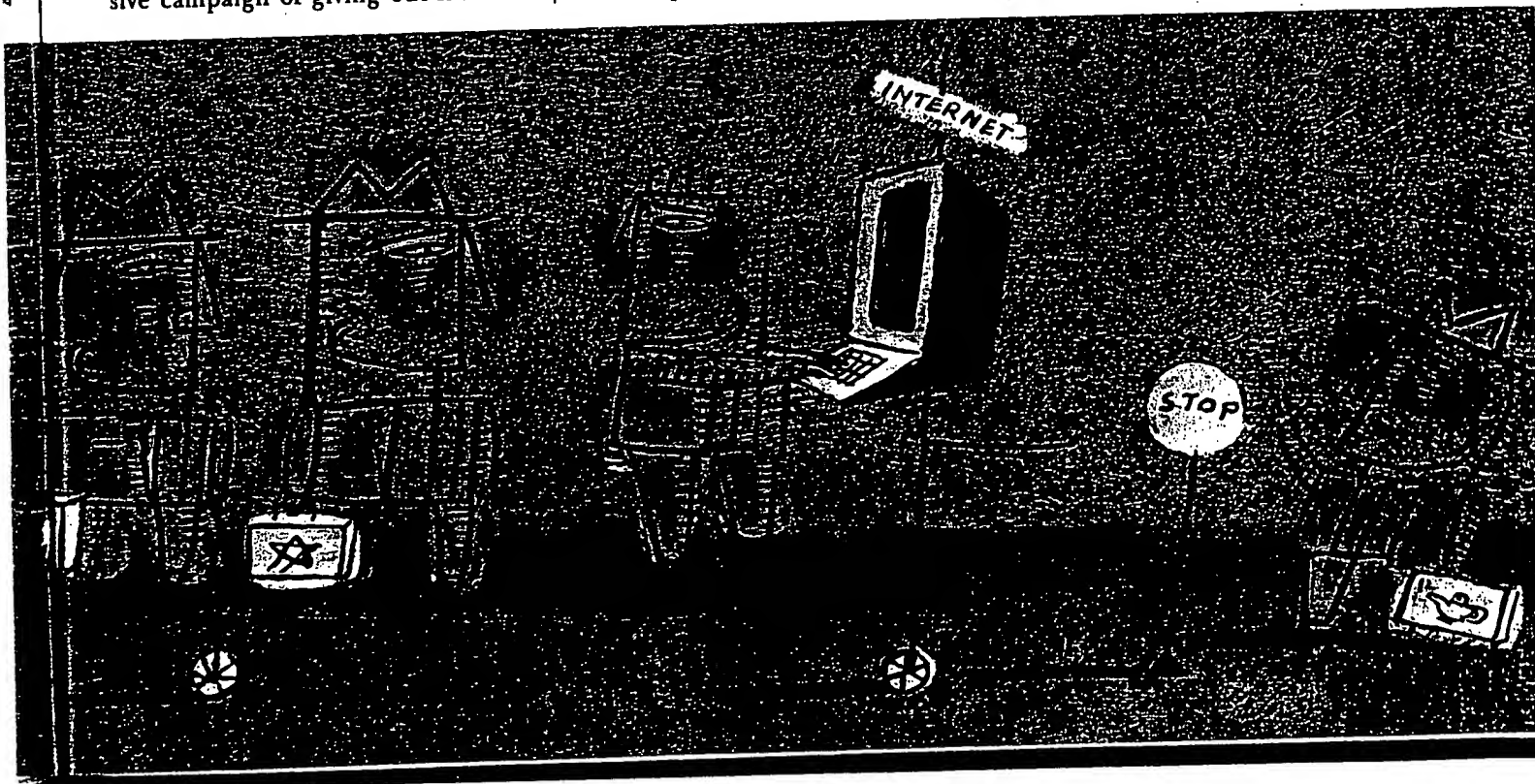
CompuServe's Usenet software betters AOL's in one way: When you choose to reply to a message, the default settings send the reply through e-mail only, and not into the newsgroup—a feature many Usenet residents will appreciate.

While seeking to protect the Internet from breaches of netiquette by its members, CompuServe also is trying to shield its members from any perceived offensive aspects of the Internet. Scroll through the lists of available newsgroups on CompuServe, for example, and alt.sex is nowhere to be found. However, you can subscribe to the newsgroup by typing in the name yourself.

Choosing a group from one of CompuServe's lists is no piece of cake. You must slowly scroll through hundreds of listings in alphabetical order. For example, to find alt.tv.something, you must make your way through everything from alt.1d to alt.travel.roadtrip.

And if you happen to subscribe to one of the ".binaries" newsgroups, where people post encoded pictures, sounds, or movies, the newsreader software offers no means to decode them. America Online left out this function as well, much to the chagrin of the people who frequented those groups.

According to Dave Bezaire, CompuServe's senior product manager, the service is planning several other new Inter-



"Our intention is to be very clear with our members about what the Internet is—to make them aware that they're leaving this world."

net-related features, but does not want to release too many new offerings at one time. "The tremendous press coverage of the Internet has raised expectations sky high," Bezaire says, "so we want to avoid overhyping it in our community before it's available."

Bezaire would not comment on what else might lie ahead for CompuServe. "Our philosophy is to bring Internet services forward on an incremental basis—manage the process, manage the service, and educate the community," he said. "As we release additional Internet products and services, I want it to be a satisfying experience for all our members."

GEIE: Holding Its Ground

GEIE has been offering an e-mail gateway to and from the Internet for several years, but nothing more. That's the way it will likely stay "for the foreseeable future," according to Vivian Kelly, media relations specialist.

As on AOL, e-mail on GEIE is free and unlimited. And GEIE users are not entirely cut off from the Net: It offers an Internet RoundTable, in which sysops will gladly search for and retrieve files if requested by users, and will even scan files for viruses. But Kelly says that GEIE has been reluctant to offer full Internet access because the service is part of General Electric Information Services (GEIS) and its corporate customers have concerns about security.

Prodigy: In Time, All Things

With more than two million individual users, Prodigy is the world's largest on-line service, and it is preparing to open its door to the Internet—albeit slowly.

Prodigy already has an e-mail gateway to the Internet, although users must acquire separate software to send and receive messages. But that's going to change,

according to product manager Bill Day, who said that basic Internet e-mail capabilities would soon be integrated into the software. "We're reorganizing Prodigy to put more focus on the Internet," Day explained. "We're very excited about it."

The next phase of Prodigy's Internet access will be some refinements to the e-mail software, and access to Usenet News. And Day said the service had given a lot of thought to how Prodigy users would react to the Internet, and vice versa. "We've been thinking about how we should educate our people on how the newsgroups operate. We need to cover How do you behave, and What do you not do?"

Prodigy will try to lessen the force of the impact—if not the scope—in several ways. First, it will cache Usenet News on its own server to reduce the impact on the Internet. Second, unlike America Online, Prodigy won't be making it easy to reach Usenet. "Our approach is that you have to be interested and knowledgeable enough to reach these services," Day said. "The people must be communications savvy. It's not point and click." Those measures, coupled with a "strong education effort," he said, should mean that Prodigy users would know how to behave when they reached Usenet.

Prodigy is also planning to offer services that don't appear on the Internet, including an alliance with CBS to offer interactive entertainment features including show previews.

In terms of the Internet, Day said that Prodigy eventually would offer some sort of Gopher-like access to information on the Internet, including government resources, sound files, and other data that might interest users. But the information would be far from comprehensive, and would be a selection of some of the more popular files. "We would act as a mediator between the Internet and our members," Day said.

"Our intention is to be very clear with our members about what the Internet is, and to be honest about the world out there—to make them aware that they're

leaving this world," Day explained. "We're thinking hard about what we've learned about content and customer service by running our own little on-line service, and that will affect how we pick content and how we present it to people."

Down the Road

The major on-line services are not rushing to provide full Internet access because doing so might well lead to their demise. After all, no matter how you access the Internet—from school, a local provider, or a commercial service—the content is the same. And as better, user-friendly Internet interfaces like Mosaic and Eudora are developed, AOL, CompuServe, and Prodigy will find it harder to differentiate themselves from the Internet.

How can the on-line services compete in this evolving landscape? First, they must keep a step ahead of the Cellos and Trumpets, and must design interfaces that any junior high school student can use. They also must develop a friendly help staff to assist users in learning to cruise in cyberspace. Users only will be willing to pay more if they're getting something extra, such as 24-hour support.

The on-line services also will have to stop charging hourly fees for Internet services. Anyone who follows more than five or six newsgroups knows that on-line time can add up, so why pay \$3-\$10 per hour when you can find a local Internet provider that charges a flat rate?

Another way on-line services could compete with the Internet would be to filter it. Users could be guaranteed an environment that's friendlier, if not as open—a homogenized, pasteurized, porn-free, flame-free Internet.

Now is not the time to place bets on which of the on-line services will prosper or survive. The landscape is changing every day, and no one can venture more than a guess as to how the market will shake out over the next few years.

Andrew Kantor (ak@mecklermedia.com) is associate editor of Internet World.

On Haiti, Shooting From the Lip The Washington Post October 6, 1994, Thu

19 of 21 DOCUMENTS

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October 6, 1994, Thursday, Final Edition

SECTION: STYLE; PAGE B7; CYBERSURFING

LENGTH: 939 words

HEADLINE: On Haiti, Shooting From the Lip

SERIES: Occasional

BODY: "

Pit Stops

For those visiting London who are in need of a quick daytime fix, "Cyberia" -- a "cyberspace cafe" -- has opened recently in central London offering coffee, cakes and connection to the Internet. **Connect charge: 1.95 British pounds** per half-hour. The address is 39 Whitfield St., W1 (near to Goodge Street underground station on Tottenham Court Road).

Jeremy Robinson

robinson@well.com

We also hear that at the Infomart in Dallas, off the Stemmons Freeway west of downtown, the newly opened High Tech Cafe has a computer maitre d' that asks diners in its machine voice, "Nonsmoking, smoking, or modem-ready?" Sure enough, not only is there a phone jack at the table, but a fax machine is ready nearby.

Found something intriguing, improbable, insane or especially useful on the Net? Tip Karen Mason Marrero (kmarrero@aol.com) or Joel Garreau (garreau@well.com).

GRAPHIC: ILLUSTRATION, MARC ROSENTHAL FOR TWP

LOAD-DATE: October 6, 1994

- Attachment H

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE NORTHERN DISTRICT OF ALABAMA
3 EASTERN DIVISION

4 RICHARD P. METTKE,

5 Plaintiff,

6 vs.

7 TOUCHNET INFORMATION SYSTEMS,
8 INC.,

9 Defendant.

ORIGINAL

No. 98-PT-596-E

10 THE DEPOSITION OF DANIEL J. TOUGHEY, produced,
11 sworn and examined on behalf of the Plaintiff pursuant
12 to Notice, between the hours of eight o'clock in the
forenoon and six o'clock in the afternoon of Tuesday,
June 16, 1998, at the law offices of Spencer, Fane,
Britt & Browne, 1400 Commerce Bank Building, 1000
Walnut, in the City of Kansas City, in the County of
Jackson and State of Missouri, before me,

13 LYDIA HURLEY, RPR
14 BOWEN MOTTER REPORTING
911 MAIN, SUITE 1930
15 KANSAS CITY, MISSOURI 64105

16 a Notary Public in and for Jackson County, Missouri,
17 in a certain cause now pending in the United States
District Court for the Northern District of Alabama,
Eastern Division, wherein RICHARD P. METTKE is
18 Plaintiff and TOUCHNET INFORMATION SYSTEMS, INC., is
Defendant.

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24 By Mr. Richard P. Stitt

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It is hereby stipulated and agreed by and between the parties herein that presentment to the attorneys of record of a copy of this deposition shall be considered submission to the witness for his signature within the meaning of Federal Rules of Civil Procedure; but shall in no way be considered as a waiver of the witness' signature, and is to be signed at any time before the time of trial; and if not signed by time of trial, may be used with the same force and effect as if signed.

I N D E X

WITNESS:	PAGE
DANIEL J. TOUGHEY	
Examination by Mr. Polasek	4
Examination by Mr. Stitt	83
Further Examination by Mr. Polasek	98
SIGNATURE:	107
CERTIFICATE:	108

I N D E X O F E X H I B I T S

NO.	DESCRIPTION	PAGE
1	Notice	5
2	Answer to Interrogatory No. 1	17
3	Network Topograph Diagram	20
4	John Murphy Affidavit	25



INDEX OF EXHIBITS (CONT'D.)

NO.	DESCRIPTION	PAGE
5	Videotape "TouchFax America"	40
6	1st brochure of product	54
7	TF700 TouchNet terminal brochure	55
8	TF700 brochure	56
9	Not identified	-
10	Ad for Telephony Magazine	57
11	TF450 brochure	58
12	Interactive World article, 10/92	59
13	Multimedia Interactive Terminal Loc. ducmt	59
14	KC Business Journal article, reprint	60
15	1992 brochure	60
16	Copy of Patent # 4359631	63
17	Info from VPR Creative Group	66
18	Invoice from Spinnaker	67
19	Invoice to Prodigy	68
20	Printout of source code/transaction log	69
21	Documents re: TON Services, Inc.	70
22	Documents re: Mediatel	74
23	Fax to D. Vermeire, 11/92	77
24	Document to D. Vermeire, 9/92	79
25	License Agreement	80

(Exhibits were retained by Mr. Polasek)



1 wide web sites they would like to go to. And I
2 believe now America On-Line has a world wide web
3 site and a dedicated interface through a dial-up
4 system, so they have two different paths, if you
5 will. And so I guess ours is the latter, we will
6 provide access to the internet and let somebody
7 decide where they want to go.

8 Q Okay. Let's back up. I was asking you questions
9 that relate to a user of the terminal being billed
10 for access to the internet through the use of a
11 commercial on-line service provider such as
12 Prodigy or AOL, CompuServe.

13 A Yeah.

14 Q And you said that TouchNet does not currently use
15 or have a terminal that does that.

16 A Correct.

17 Q But you did indicate they have plans to do so?

18 A Correct.

19 Q Okay.

20 A But not necessarily through America On-Line as a
21 internet service provider.

22 Q Okay. Then how is it that --

23 A You will go through a variety of different
24 internet service providers so just -- Earth Link,
25 for example, they provide -- let's say they



1 provide internet dial tone basically, right?

2 Q Okay.

3 A And our systems then will -- as if you are the
4 user, will ask you where you want to go.

5 Q Okay.

6 A Or highlight different destination points on the
7 world wide web.

8 Q But if I am the user --

9 A Uh-huh.

10 Q -- I am going to have to put my credit card in
11 there and pay for that access, correct?

12 A That is the plan.

13 Q Okay. And what I am trying to get at is, do we
14 have the terminal and the software set up to do
15 this? Do we expect to roll out a terminal this
16 year, next year --

17 A Yes.

18 Q -- or when?

19 A Very soon.

20 Q At the present time, TouchNet has not rolled out
21 one of those terminals though?

22 A Not that charges for the service.

23 Q Okay. When you say very soon, can you be more
24 specific?

25 A Sometime in the next 30 days. But, again, it is



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1 Q That would be on that particular machine?

2 A It would be stored, yes, on that particular
3 machine.

4 Q If they went to a different machine in another
5 part of the airport or something, their card would
6 go through the same validation procedure?

7 A Correct, right, correct.

8 Q This exhibit, Exhibit 3, also references an
9 on-line interactive database. And the second
10 bullet point below that, it says, Public - Access
11 to CompuServe, Prodigy.

12 A Correct.

13 Q This goes back to our earlier discussion, but the
14 terminal that this document attempts to describe
15 does not disclose the use of the credit card to
16 pay for access to CompuServe or Prodigy, correct?

17 A This document doesn't specifically do that.

18 Q And at that time, TouchNet was not -- the terminal
19 was not set up to charge the user for access to
20 CompuServe or Prodigy; is that accurate?

21 A Well, at that time, the terminal didn't even have 1991
22 CompuServe or Prodigy on it. At that time, these
23 were -- these are ideas of what you could do
24 because, again, our main business was selling to
25 third parties our system.



1 internet pop up there. Did you notice that?

2 A No, I didn't.

3 Q Let's see if we can go back. I'm not able to get
4 it stopped there. See if I can try it again.

5 MR. STITT: Let me give it a try.

6 THE WITNESS: I think I did see that.

7 You are in front of it now.

8 (Whereupon, the videotape, Exhibit 5,
9 was rewound to counter 34.)

10 Q (By Mr. Polasek) Now that we have been able to
11 stop the tape, it shows a rectangular gold block
12 labeled internet. I think it is right at -- I
13 thought it was the 36 second mark. It may be 34.

14 MR. STITT: It appears to be 34.

15 Q (By Mr. Polasek) Did that provide for access to
16 the internet? If the user was to touch that icon,
17 I guess is what you would call it, that portion of
18 the TouchNet screen, does that enable a user to
19 gain internet access or do you know?

20 A Not at that time, no. That was like MCI mail
21 above it. Those are possible uses for the system.
22 And so the reason we built this video was to sell
23 our systems. And so, again, the vision of
24 TouchFax, TouchNet was its multipurpose
25 information communication terminal that, depending



1 other types of information databases such as USA
2 Today sport center for on-line sports information.

3 And then the last bullet is BBS, which is for
4 bulletin board service applications, any kind of
5 bulletin board, which was really, you know, a
6 predecessor in many respects, you know, to the
7 world wide web. Different types of information
8 bulletin boards that our system could access.

9 MR. STITT: I think we can go on unless
10 you have redirect.

11 FURTHER EXAMINATION

12 BY MR. POLASEK:

13 Q Yeah, I have some questions starting with what was
14 marked as Exhibit No. 3. Let me start over. With
15 regard to Exhibit 3, isn't it accurate that access
16 to Prodigy and CompuServe was not available at the
17 time that this document was prepared on the
18 TouchNet terminal?

19 A That's correct.

20 Q Okay. So at the time that this document was
21 prepared, you couldn't access Prodigy or
22 CompuServe from a TouchNet terminal?

23 A In 1991, that's correct.

24 Q And this document -- again I think we have been
25 through this -- this document itself does not

